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INSIDE DOPE

by GEORGE F. TAUBENECK

'One Foot In the Door'
Is a Mild Sensation
Lives Up to Promise
Sell Me Another!
All About Specialty Merchandising
Sugar-Coated Selling
'One Foot In the Door'
Credit Is Due
Another Bible
This Is a Funny Book

'One Foot In the Door' Is a Mild Sensation

The combination of unconventional biography (of John Patterson, who taught all America how to sell) of pertinent humor, and of original merchandising principles which comprises our new book, "One Foot in the Door," has succeeded far beyond our most hopeful dreams. The first edition, which we thought would fill orders for two or three years, sold out quickly. So did the second. And a much larger edition is now ready.

Nearly everyone who reads it has something good to say about it and —what's better—orders additional conies.

Book reviewers—who are notoriously hard to impress and please—have been kind to "One Foot in the Door," too. Here are some interesting samples:

Lives Up to Promise

You are wrong if you guessed from the title that the Fuller brush salesman inspired this book. John H. Patterson, the energetic and dramatic president of the National Cash Register Co., is the hero who pushes one profitable advertising and selling idea after another through the chapters of this book. He was the originator, you know, of guaranteed sales territories, sales manuals, testimonial advertising, industrial moving pictures, and enough other time tested management and merchandising procedures to fill several more volumes. The jokes and anecdotes that leaven the serious problems of specialty selling are not shopworn, but make this really "The Laugh-Learn-Profit Book" the author promises.—Chicago

Sell Me Another!

In "One Foot in the Door," George Taubeneck has written a wise and witty book about specialty selling for salesmen. To the thousands of appliance dealers who think of their cash registers—if they think of them at all—as indispensable gadgets which probably came in with Moses, George Taubeneck's new book, "One Foot in the Door," will be a distinct shock.

Mr. Taubeneck, whose daily occupation is editing AIR CONDITIONING & REFRIGERATION NEWS, has confessedly attempted to write "all about specialty merchandising, including the laughs." He has succeeded. His book is a gusty, lusty mixture of biography, history, Joe Miller's Joke Book, salesmen's Pullman anecdotes, and information on the art of selling.

Dealers who read this volume may henceforth require all novice salesmen to bow three times whenever passing the cash register. Not because it is a cash register, but as a sign of grateful humility to the man who, because he formed the National Cash Register Co., founded the empire of salesmanship. And an empire it is. One man, John Patterson, is, according to this book, almost solely responsible for the discovery and the formulation of the principles of selling which are today current in the United States.

"One Foot in the Door" is a lightly and humorously written book. But John Patterson was not a funny man.

(Concluded on Page 10, Column 1)

1948 All-Industry Exposition Will Be 'Tops'--Come!

(An Editorial)

A NYONE who has attended an All-Industry Refrigeration & Air Conditioning Exposition knows that it's the event of the year for everyone in the business. The things you see, the things you hear, the people you meet, the fun you have—it all adds up to a great week for the common people, if we may borrow a phrase from the politicians.

Results from previous All-Industry Expositions so far have exceeded expectations so much that manufacturers have prepared their exhibits this year with unusual care. Merely displaying the products they have to sell is not nearly enough, they have learned. Their exhibits must also be educational.

Last year the exhibits which drew the biggest crowds were the ones which provided action for the visitors, which showed them how and why products were made in a particular way, which taught them how these products could best be applied, which demonstrated their proper use.

These were the exhibits which caused talk out in the field for weeks and months afterward. And this "talk," relayed back to headquarters by field men, has resulted in the unprecedented care, thought, and attention which are being expended on the creation of the exhibits planned for the 1948 Exposition.

Jim Hood, that indefatigable man of ideas, and his hard-working committee, are also cooking up entertainment for the visitors which, as you can see from some of the advance notices in this issue, will furnish you with the equivalent of a New Year's holiday on Broadway. Work and play are to be balanced. The whole program is an embodiment of the theory of life which has been so prevalent in this industry down through the years—the "work hard, play hard, go home happy" philosophy.

No matter how much you may learn from the exhibits and from talks

(Concluded on Page 12)

Textile Plant Cooling Bill In S. Carolina Meets Opposition

COLUMBIA, S. C.—A subcommittee of the commerce and manufacturers committee of the South Carolina House of Representatives, headed by Representative Marion Mims, of Lee, conducted a hearing here recently on a pending bill requiring air conditioning for textile and garment plants in the Palmetto State. Neither representatives of labor nor of management endorsed the measure during the hearing.

T. Frank Watkins of Anderson, general counsel for the South Carolina Cotton Manufacturers' Association, urged a thorough study before adoption of any legislation of this type asserting "This is a technical or engineering subject" and that "experts should be consulted for standards, lest a hardship be imposed on management and workers.

Chairman Mims said that his committee would not make recommendations but would report to the full committee its findings. During the (Concluded on Page 2, Column 5)

Curtain Goes Up Jan. 26 On All-Industry Show

DETROIT—The curtain will go up next Monday, Jan. 26, at the Cleveland Auditorium, on the biggest All-Industry Refrigeration & Air Conditioning Exposition ever to be held, with some 172 exhibitors showing their 1948 products to an estimated 20,000 members of the trade.

Cleveland's hotels will be jammed and those who have not yet obtained reservations are advised to check on accommodations immediately. The Show Committee is sending all requests for rooms to Wayne Stetson, Housing Chairman, All-Industry Refrigeration and Air Conditioning Exposition, 511 Terminal Tower, Cleveland 13.

Thompson Is Sales Director of Kinetic

WILMINGTON, Del. — Kinetic Chemicals, Inc., has announced that R. J. Thompson, formerly sales manager—technical, became director of sales, succeeding W. W. Rhodes, effective Jan. 1, 1948.

Rhodes is appointed sales manager—aerosol propellants. R. L. Williams has been appointed assistant sales manager—refrigerants.

Manufacturers State Prices Will Hold--'If'

NEW YORK CITY—If wages are stabilized at present levels and production is not lowered, most manufacturers believe that they can hold prices at present levels, according to a survey of current business practices by the National Industrial Conference Board, just released.

Cost increases arising out of the second round of wage increases, the executive reported, "have been largely absorbed through reduced profits, higher prices, increased efficiency, and larger volume. But any further rise in the cost of living may set off strong demands for another wage increase which most producers fear they cannot absorb."

Nearly all producers of primary goods asserted that they hope to avoid price increases in the next six months, while about two-thirds of the metal manufacturers expressed similar expectations. Among the other manufacturers, estimates of increased prices and unchanged prices were about evenly divided. In the last group are consumer goods industries, important buyers of farm products.

For all manufacturers combined, the estimates are: No change, 62%; increase, 34%; and decrease, 4%. Most executives who declared that increases will be necessary placed mark-ups from 50 to 10%.

mark-ups from 50 to 10%.
(Concluded on Page 24, Column 3)

Electrical Union Tells Stand on Wage Request

NEW YORK CITY—If the United Electrical, Radio, and Machine Workers Union (CIO) gets the substantial wage increases it apparently intends to ask from the major electrical manufacturers, higher appliance prices are in prospect this spring.

Manufacturers insist that increased labor costs will push prices up.

The union, however, takes another view. James J. Matles, national director of organization for UE, has declared that industry in general, based on corporate earnings for the first half of last year, can well afford to boost wages 13% and lower prices 10% without reducing profits below the 1939 minimum.

Over-all price reductions by industry, particularly on items affecting the cost of living of the average working man, would probably temper the union's demands, he indicated. But reductions on luxury items such as television receivers, electric blankets, and automatic dishwashers wouldn't affect them, he averred.

"The people don't eat television receivers," he stated. "They don't wear automatic dishwashers and most of them are more worried about the rising prices of fuel than they are about keeping warm with luxury price electric blankets."

Matles intimated that the union would not ask that wage increases be effective before April 1, giving industry "a chance to reduce prices within the next 90 days."

He declared that General Electric's reduction of appliance prices was more than counterbalanced by a previous company statement that it reserved the right to increase prices on generators, turbines, and other heavy equipment by as much as 20%.

One manufacturer, however, charges the union with lack of cooperation in the battle against inflation. Walter M. Schwartz, Jr., president of Proctor Electric Co. of Philadelphia stated:

"Holding down the cost of living will require the unselfish cooperation of labor leaders and industry. It is ascertained from the UE statement that the UE does not intend to offer such cooperation.

"It is beside the point to state the people do not eat or wear electrical appliances. Appliances do represent a substantial part of the cost of living and the only part that intelligent leadership of the UE in the electrical industry can materially affect.

"It is absurd to blame the higher cost of clothing on the electrical manufacturers. The UE should approach the clothing workers on the subject."

'Dollar Down, 2 Years To Pay' Is Offered

DETROIT — "Dollar down, two years to pay" terms on appliance sales are currently being offered by Harvey Sales, plumbing supply firm

Among the items being offered on these terms are a Crosley refrigerator, Bendix washer, and General Electric range.

The offer says that "if you can't come in, mail a \$1 and have any of these famous products delivered to your home."

Bechaud Is Ben-Hur Vice President

MILWAUKEE — A. B. Bechaud, sales manager, has been elected vice president of the Ben-Hur Mfg. Co., reports Herman Uihlein, president.

The Ben-Hur company manufactures farm and home freezers and a new home electric refrigerator.

Bechaud organized Ben-Hur's freezer department in 1943 and developed the nation-wide sales organization starting at that time.

194<u>8 Is Called</u> 'Critical' Year In Refrigerators

May Determine What Type of Retail Outlet Will Survive

NEW YORK CITY—"1948 may be a crucial year in the household refrigerator industry for the manufacturer, wholesaler and retailer—it will be a year of adjustment, jockeying for position, fence mending, and organizational strengthening—it may well set the pattern for the entire future of the industry by determining what brands will survive and what retailers will dominate their respective markets."

That's what the National Retail Drygoods Association conference on appliances was told here this week by H. M. Kelley, appliance sales manager for Frigidaire.

They also heard Dan Packard, Kelvinator household sales manager, report on the findings of an independent marketing counsel and research organization which showed that while most retail appliance salesmen today are pretty bad, department store salesmen are the worst of the lot.

While the speakers both generally predicted that 1948 "could be the industry's biggest year," they warned that failure to get back to intense "specialty selling" methods might lead to catastrophe for many dealers.

Kelley described "specialty selling" as the key to "survival" during a possible chaotic period of price-slashing and dumping, that can be expected as "surplus" dealers unload inventories and fight to stay in business.

"History has already proved that effective specialty selling can carry an industry through such a critical period," said Kelley. "During the depression of the '30's the refrigerator business continued to grow year after year much to the amazement of other industries. There are those of us who know, however, that this progress could be attributed primarily to the fact that the refrigeration industry had a highly-trained specialty sales organization.

"On every side," Kelley emphasized, "wherever you go in appliance circles, everyone is talking about a buyers' market being just around the corner and that we must prepare for it. Yet actually if we will be honest, few if any constructive preparations have actually been made to date."

Some months ago, Packard related, Kelvinator retained a Chicago merchandising counsel—J. R. Ozanne & Associates—to make a report on the effectiveness of appliance salesmanship in retail stores, and particularly to make recommendations on how training materials can be made more effective and more useful. Not only department stores, but all types of (Concluded on Page 4, Column 1)

Wholesaler Nov. Sales Down, Inventories Up

WASHINGTON, D. C.—Whole-salers' sales for November, on a seasonally adjusted basis, dropped 6% from October while inventories at the end of the month were well above those at the end of October, the U. S. Commerce Department has announced.

Estimated total sales for November were \$5,773 millions, divided between \$1,852 millions in durable goods and \$3,919 millions in non-durable goods. Durables were 4% below October, while non-durables were down 7%.

Inventories at the end of November were estimated at \$5,232 millions with durables up 5% and non-durables up 7%.



Of Newly-Established G-E 2 New Models In Line **Water Cooler Division**

BOWLING GREEN, Ky.-General Electric has established a Water Cooler Division and has appointed C. E. Horner as division manager, G. R. Prout, vice president and general manager of the G-E Air Conditioning Department has announced.

Headquarters for the new division will be at the new water cooler plant

Full responsibility for engineering, manufacturing, accounting, and sales of the water cooler product line, which was formerly handled by the Commercial Refrigeration Distributor Division, will be undertaken by the new division.

Until further notice, the G-E plant at Ft. Wayne, Ind., will continue to manufacture water coolers. H. M. Landemare will continue in charge of sales until a sales manager is appointed, and there will be no change in the routine of handling orders, shipments, and billings.

A graduate of Drake University, Horner began his G-E career in 1935, and served in various statistical and accounting posts at Schenectady until 1937 when he was named a traveling

In 1940 he transferred to the Air Conditioning Department at Bloomfield, N. J. in general accounting, where he continued until 1941, at which time he received an appointment as Works Accountant at the Ft. Wayne plant. He served in this post until 1947 when he was placed on special assignments.

Horner Appointed Manager Loudon Sales Announces Textile Plant Cooling --

MINNEAPOLIS - Two appointments and two new models in the Loudon line of commercial refrigeration equipment have been announced by R. J. Loudon, president of Loudon Sales, Inc.

Louis Burpee was named manager of the company's recently opened Oakland, Calif. branch office, and the B & B Appliance Co. of New Orleans was appointed to handle sales in Louisiana as well as Latin America.

An 8 cu. ft. biological refrigerator with either solid or glass doors was recently introduced, while a two temperature, chest type home freezer and combination bottle cooler is expected to be available in the near

Besides selling its own commercial refrigeration line on a nation wide basis, Loudon also distributes the products of the Federal Refrigeration Co. of Waukesha, Wis. in all those states west of the Mississippi

159 Inspections of Ice **Industry Plants Reveal** 77% Wage-Hr. Violators

WASHINGTON, D. C .- Violations of the minimum wage, overtime, and child-labor provisions of the Fair Labor Standards Act and the Public Contracts Act were found in 77% of the 159 inspections in the ice manufacturing industry, according to the 1947 Annual Report of the Wage and Hour and Public Contracts Division, U. S. Department of Labor.

Just issued to the Congress, the report, which covers the 12 months ended June 30, 1947, shows that the ice manufacturing industry inspections resulted in back wages amounting to \$76,554 agreed or ordered to be paid to 718 employes.

While most violations revealed had resulted from improper computation of overtime pay, it was found also that there were employers who had failed to pay some of their employes the 40-cents-an-hour minimum wage required under the Fair Labor Standards Act-the Wage and Hour Law.

Wm. R. McComb, Administrator of the divisions, points out that the violations disclosed are not necessarily representative of the ice manufacturing industry's compliance record as a whole, since the divisions make inspections "where there is a high degree of probability that violations will be found."

In addition to the minimum wage requirement, the Wage and Hour Law provides that all employes engaged in interstate commerce or in the production of goods for interstate commerce must be paid at least time and one-half their regular rate for work beyond 40 hours a week-unless they are specifically exempt. The Public Contracts Act applies generally to employes working on government supply contracts for more than \$10,000, and its minimum standards Hour Law.

Essick Co. Plans \$200,000 Air Cooling Factory In Little Rock

LITTLE ROCK, Ark. - A new plant for the manufacturing of evaporative air cooling equipment, will be constructed in Little Rock by the Essick Co. of Los Angeles, ac-

cording to a recent announcement. The new plant will be located on three and a half acres on Roosevelt road, and will cost approximately \$200,000. The first unit of the plant will have about 40,000 sq. ft. of floor space, and will employ 100 workers. Harry L. Rogers will be superintendent, and Robert M. Schow, plant manager.

(Concluded from Page 1) summer, the committee visited nu. merous textile centers and studied

conditions. Meanwhile, labor leaders attending the hearing here this week called for "healthful working conditions for employes" in textile plants, but lent no support to the pending measure.

Earle R. Britton, president of the State American Federation of Labor, asserted that the pending bill "would not be to the best interests of South Carolina" and added that collective bargaining "if left unhampered" would be the best method to affect proper conditioning of textile plants.

M. L. Wood, representing the Textile Workers of America, said local plants had installed systems called "air conditioning" which reduced temperatures to less than 85 and humidity to the 80 standard proposed in the bill.

Dorsey Moseley of Winnsboro, representing textile workers, said the need for "air change" or "air wash" systems was acute to afford comfortable working conditions. He expressed the opinion that the bill now pending in the General Assembly needed amendments to be feasible.

R. L. Gamble, State Labor commissioner, said only with amendments would the bill be "to the best interests of the State."

Herrick Gets Post at Refrigeration Sales

CLEVELAND - Warren W. Farr, president of Refrigeration Sales Corp. here, has recently announced

the appointment of O. B. Herrick as wholesale sales manager. Herrick has been

in the commercial refrigeration sales field for nine years and is a former president of the Refrigeration Contractors Associa-tion of Cleveland. He is also a cer-

O. B. Herrick tificate member of Refrigeration Service Engineers Society and an associate member of the American Society of Refrigerating

Engineers.

Home Freezers Register Gain In Knoxville Report

KNOXVILLE, Tenn.-With only 32 dealers reporting their appliance sales for November to the Knoxville Utilities Board as compared with about 45 in previous months, little basis is offered for comparison with past performances, though, in general, sales were holding up well.

Home freezers, for instance, were comparatively well ahead of the past several months, with 18 units reported sold in November and 19 in September and October

The detailed November sales report follows:

	No. of Units	Value
Home freezers	18	\$ 6,742
Refrigerators	233	61,441
Ranges	183	42,466
Water heaters	73	8,785
Other major		-
appliances	27	3,451
Dishwashers	5	1,459
Vaste disposal units.	4	495
Washing machines	235	35,165
roners	26	4,406
space heaters	158	6,819
small appliances	525	8,610
ighting equipment .	59	1,007
amp bulbs	1.079	1,825
Tarm pumps	6	600
Other equipment	516	13,637
Total	3.147	\$196,908

Members of the Refrigeration Equipment Wholesalers Association

Your refrigeration parts and supply house in Central New York and Northern Pennsylvania

CENTRAL SERVICE SUPPLY

647 S. Warren Street, Syracuse, N. Y.

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the Outstanding SELF-CONTAINED Unit

It's the most modern of its kind-completely new, designed throughout for quiet, vibrationless operation and field serviceability.

Motor and compressor are combined in one piece of equipment (eliminating belts, pulleys, fly wheels and couplings) and hermetically sealed against dirt and moisture. There are no shaft seals, and it is never necessary to oil the motor or make adjustments. When necessary, the equipment is readily accessible for servicing in the field.

Other features: dynamically balanced crankshaft, crankcase with removable cover, positive

displacement gear-type oil pump, large oil filters in the lubricating oil line, pistons equipped with four piston rings, removable cylinder liners, Worthington Feather* Valves, refrigerant-cooled cylinder walls and refrigerant-cooled motor.

Models are available now in 3-ton and 5-ton

Get ahead with Worthington's Self-Contained Air Conditioner—the air conditioner with all the new features, that's going out front in 1948. Worthington Pump and Machinery Corporation, Harrison, N. J. Specialists in air conditioning and refrigeration for more than 50 years.

*Reg. U. S. Pat. Off.

SEE IT AT

International Heating and **Ventilating Exposition** — **Worthington Booths** 30-31 and 44A-45.

WORTHINGTON



AIR CONDITIONING AND REFRIGERATION

"SPEAKING FOR everyone at Temprite, I want you to know that we are looking forward to seeing you at the All-Industry Exposition in Cleveland. Stop at Temprite's booth, No. 509 and pay us a visit. Then get a good look at one of the smoothest lines of drinking water coolers you've ever seen. Notice the streamlined stainless steel tops. See the new pressure bubbler coolers (air-cooled or water-cooled) and the smartly styled bottle type cooler. Cast your eyes on our 1948 model carbonators and cooler-carbonators for soda fountains, bars, beverage vending machines and many other applications. Here's small, compact size, trouble-free operation and top efficiency that actually delivers over 5600 glasses of highly carbonated water from a single tank of CO2 gas. Ask to see the new Temprite draught beer cooler packages . . . new models and new accessories designed to give even greater customer satisfaction than ever before. Get the inside facts on the new model 600W industrial water cooler, designed for bottling plants, bakeries, and industrial applications. Size— $15^{\prime\prime}$ diameter x $54^{\prime\prime}$ high. Capacity—750 g.p.h., 40° drop—25 horsepower. See the complete 1948 Temprite line and make your arrangements for the industry's biggest and best year yet." TEMPRITE PRODUCTS CORP., LUD EMDE, VICE PRESIDENT and GENERAL MANAGER MPRITE Originators of Instantaneous Liquid Cooling Devices COMMERCIAL SODA FOUNTAIN COOLERS WATER COOLERS Established 1929 INDUSTRIAL TEMPERATURE DRAUGHT BEER SEPARATORS WATER COOLERS COOLERS

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13,637 \$196,908

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What's Wrong With the Work of Today's Refrigerator Salesmen?

(Concluded from Page 1, Column 5) retailers in our industry were studied.

After several months of study Mr. Ozanne reported that, according to his studies, there seems to be a lot of work that dealers themselves must do with sales organizations before manufacturer-prepared training materials can be fully effective.

3 Things That Are Wrong

To be a little more definite as to the information in these reports, here are the three major points made over and over again.

1. Customers report too long waiting from salespeople. Waiting 10 to 15 minutes common, and 30 to 40 minutes occurring time and time again—in your department stores. This compares with 2 to 5 minutes attention in small dealer's stores. In addition, many, many complaints of waiting long periods when salesmen were obviously talking among themselves and not being busy with other customers.

2. Lack of any evident interest in customer needs or requirements. This was brought out time and time again by reports to the effect your appliances salesmen have been all too often just pointing out the appliance available for delivery, stating the price and then standing back and expecting the customer to say "I'll take it." Too many times, the reports said—"His attitude was almost as if he were doing me a favor by letting me have one."

3. The salesman's failure to indicate to the customer a desire to serve. In not over one out of 20 reports did

showing at the All-Industry show.

a department store salesman attempt to help the customer determine what appliance would best serve her needs.

In small stores, there was, at least once in a while an evident interest expressed by the salesman in helping the customer determine which product or model best met her requirements.

In the large stores—the common compaint is still the salesmen's statement, "Madam, they are all good—just select the one you want"—when the customer needs and wants the help of a salesman in making her selection. In fact, she is going to get it from some salesman somewhere before she spends \$250 to \$300 for a major appliance.

Just Waits on Trade

The net of the situation is that the average department store appliance salesman today—although we believe he has the knowledge and ability to sell—has drifted into the habit of just waiting on trade. Little evidence of his sales ability is seen.

"I believe you men managing appliance operations knew the disappointing news that was in these reports," Packard said. "But there is something you may not realize—according to this study, the quality of appliance salesmenship being used in department stores is the poorest of any class of dealers. And for your information, the quality is best in the small successful major appliance store. Generally speaking, the smaller the successful store, the better the quality.

"If you will shop your own stores and own communities, and I know

many of you are doing this, a lot of you will come up with the same answer.

"Now, this is some pretty serious criticism of your salesmen—and I want to say that actually I don't feel they should be criticized or blamed too severely for two reasons. One—they haven't had to sell. For months they were nearly driven crazy by demanding shoppers when they had little on the floor.

"And second—I wonder if they have been given the counsel and individual training that is necessary to make them realize the importance to their own future of taking time to serve and sell today.

"In nearly all forms of merchandising, as we all know, salesmanship and courtesy dropped to all-time lows during the war years. Shortages of goods and lack of manpower were obviously the primary causes. The general attitude was that the whole problem would be solved when these causes were washed out in the natural course of events. But after more than two years of peace, the problem remains, nearly as severe as it was at its worst-and many times as important, because we are obviously near the end of the 'more customers than goods' cycle.

"If something is not done—you and your salesmen are going to be blaming your distributors and manufacturers for loss of business to other dealers, when actually you will be losing sales to the kind of customer service and salesmanship essential to big ticket sales.

"Now, what should be done and what can be done.

"We know that some of the very finest of specialty selling organizations in this industry are in department stores. There is no reason why all department stores cannot have the best sales organization in their cities. They have the prestige that enables them to hire the best men—they have the traffic to insure their men the most practice—and in selling as in anything else practice makes perfect.

"Here's what we think you're going to have to do to get the results you want—you're going to have to do a lot of sales training yourselves.

Finding Time for Meetings

"I understand that in some cases your men cannot be asked to come early or stay late for sales training meetings.

"Where this is true, you are going to have to have meetings with part of your force on different days, during store hours. In my opinion, this will take a minimum of two hours per week.

"For some time, I believe, these meetings must be devoted to salesmanship and customer service instead of to product details; until you get this point over and in practice, knowledge of the various products is of little value.

"Before anything else, your salesmen should be impressed with the fact that the store customer is a business guest and is entitled to the same courtesy that a guest in the salesman's home would naturally receive. She should be made to feel welcome, made to feel at ease, made comfortable by taking her packages —yes—treated exactly as the salesman would treat a personal guest.

"Second, appliance salesmen must be taught to take the *time* a \$250 sale warrants, and to use that time to do three things:

3 Steps for Salesmen

"1. Classify each prospect as to needs and desires.

"2. Through carefully doing this, establish an evident desire to serve.

"3. Then sell hard the product and model selected to best suit the prospect's needs.

"4. In stores concentrating their sales effort on one or two makes, training men to do this is not too difficult. Where you handle several makes, it becomes more difficult.

"In multiple line stores, because of your salesman's desire to be fair to all resources, his common statement is to the effect that 'all are good, just choose the one you want.' Now -anyone who has spent many years in the appliance business will tell you from experience, while this method may be all right for the clerk in the hosiery department, it is not sufficient to convince a customer who may be spending \$250 for an appliance. Some customers will buy this way, to be sure, but most will go on looking until some salesman, somewhere, convinces her that one model of one make is the best value for her to own.

"This can be accomplished in multiple line stores, and it must be accomplished if you are to get your share of the industry volume. It can be done by teaching salesmen to classify each prospect.

"Before showing a refrigerator, for example, the salesman can simply ask the customer questions such as these:

REFRIGERATION PARTS

Packard Suggests 'Questions'

"a. Do you own a refrigerator?
"b. Does some relative or friend have one that you particularly like?
"c. Have you seen one advertised

that interested you?
"d. How many are there in your

family?

"e. Do you do much entertaining?

"f. Do you want a lot of frozen food storage space?

"Those questions and others of a similar nature will do several things.

"First—they will show the customer the salesman's desire to be of real service; second—they will give her confidence in the salesman's ability to help her make a selection best suited to her needs; third—and most important—they will enable a salesman to select a model to sell to her—one that he can go all out on as the best for her particular needs.

"In other words, in this way he can give her the conviction she must have, the conviction that here is the best appliance for her money—not for everyone—but for her.

"You may say, how about the manufacturers' reaction to such tactics? I don't believe there is a manufacturer anywhere but who would definitely support this type of salesmanship in your stores, as against your salesmen's present statement of 'They're all good, madam, just select the one you want.' And the main reason manufacturers would favor it is that more total sales would be made by the industry.

Presentations a Must!

"One more point on training before you reach product detail. It is absolutely necessary for each prospect to have a thorough presentation, even though she isn't ready to buy today. If she is interested enough to listen, the chances are she will be buying soon, and from your store, if she is sold at the opportunity she is giving you by her presence in your department.

"Salesmen may say they haven't time to do this. You and they cannot afford to have them fail to take the time. Remember how much it costs to bring customers into your store.

"We all are aware that no salesman can know too much about his product. His knowledge isn't what counts, however. It's his ability to use this knowledge to show the customer how the product she selects, or he selects for her, will best serve her needs. His major task is to show her, not how the product is made but what it means to her in service and utility and satisfaction, because of the way it is made.

"The training outlined here isn't something that can be accomplished in three meetings or in 10 meetings—it may take a month or two or three sessions a week to get the first tangible results you want.

"And even then, the training job must not stop there. It must be carried on into the professional factors that make for superior salesmanship. This calls for the type of training meeting that goes into the analysis of lost sales—lost customers—with all of the men discussing the ways in which a loss could have been converted into a sale. They must discuss the means of handling objections, getting action—of all of the things the trained salesman uses to close the highest possible percent of prospects talked to."





321 EAST GRAND AVENUE . CHICAGO II, ILLINOIS

DIVISION INTERNATIONAL DETROLA CORPORATION

MARION, OHIO • BRANTFORD, ONTARIO

Merchandising Magic IN A SUPERSTRUCTURE!



full color...life-like FRIGID-FREEZE 3-Dimensional Pictures bring New Life to Sales of Frozen Foods and Ice Cream

Wheelat Where You Want It!

They attract your customers' eyes from all over the store these rich, colorful, softly-lighted food pictures in 3-Dimensions. Featured exclusively on the superstructures of Frigid-Freeze cabinets, these pictures have depth . . . look real. They come to life before your eyes! You have seen nothing like them before and, undoubtedly, you've seen nothing like the sales results they produce. "Merchandising magic", you'll say, and it's just that-not the trick movement of a single hand, but the accelerated movement of many hands, reaching eagerly and with buying intention into FRIGID-FREEZE cabinets. Into your FRIGID-FREEZE cabinet-if you have one on your floor!

Featured Exclusively by FRIGID-FREEZE*

3-Dimensional Pictures made sales and merchandising history in 1947. You'll find them on the superstructures of three FRIGID-FREEZE Frozen Food and Ice Cream cabinets: the Open-Top "Spot-Special" cabinet described alongside, as well as the 20.2 and the 12.4 cu. ft. cabinets with removable Thermopane slide-tops. Store managers report new consumer interest ... faster turnover ... greater sales and profits in frozen foods and ice cream, wherever 3-Dimensional pictures are used. They make these profitable items the center of all eyes. They are conclusive evidence to you that FRIGID-FREEZE does not merely build cabinets . . . FRIGID-FREEZE builds SALES.

Write or wire today for all the facts.

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Open-Top "Spot-Special" Cabinet-on-Wheels

Here's a cabinet that combines: (1) 3-Dimensional Pictures, to make your customers want to buy; (2) Open-Top construction to make it easier to buy; (3) Complete Mobility: "Wheel it where you want it" to any traffic spot in your store. Load it daily, or several times daily, with "specials" or timely "staples". (4) Right size cabinetsmall enough to fit anywhere, yet large enough to hold ample supply; and (5) New related selling opportunitiesmove the products on near-by shelves that naturally "go" with products in cabinet.

SPECIFICATIONS: Capacity, 200-250 1-lb. cartons. Overall height 58¾"; length 46½" at base; width 29¾". Power: heavy duty, hermetically sealed 1/3 H.P. unit. Concealed



General Offices and Factory BARBER, NEW JERSEY

NOMA ELECTRIC CORPORATION

PROOF OF MERCHANDISING MAGIC

A packer of frozen peas placed the Frigid-Freeze Open-Top "Spot-Special" on test in 3 stores. Here's what he found

61	Average Sales— conventional Cabinet	Sales with the "Spot-Special" Cabinet	increase 6 times
	36 units a week	204 units— 7 days 144 units—11 days 216 units— 6 days	almost 4 time

THE ABOVE ADVERTISEMENT, now appearing in the trade press, describes one of the sales-stirring features of Frigid-Freeze cabinets which are setting new sales records the country over. You'll want to see the complete line... see all

the exciting features that can mean bigger sales, higher profits for you in 1948.

At the Cleveland Show—See FRIGID-FREEZE, "the most Dynamic Line" Public Auditorium, Cleveland, Ohio, Jan. 26 to 29

BOOTHS 508, 510, 512

WALK IN Perfection

BY ONE OF AMERICA'S PIONEER COOLER MANUFACTURERS



The "Bromann" Perfection cooling room has been manufactured of the highest quality workmanship and design for over 50 years.

Today this "Perfection" walk-in refrigerator is a source of added profit, a creator of new customers, and a vital and essential part of successful merchandising.

NOW AVAILABLE IN ALL SIZES

Write For Prices and Specifications

Bromann Bros.

857 FULTON ST.

CHICAGO 7, ILL.

MANUFACTURERS OF REFRIGERATOR EQUIPMENT AND BUTCHER SUPPLIES FOR OVER 50 YEARS.

Iowa Dealer Hanson Tells How Now-Famous 'Corn-Hog' Promotion Plan Came About

By Phil B. Redeker

CHICAGO-"It was the Mrs. who came up with the idea for our 'cornhog' sale," said John Hanson, Forest City, Iowa, appliance and furniture retailer, who could bid fair to become the Appliance Dealer of the Year for the publicity he received on this promotion.

(Hanson is the Frigidaire dealer who offered to trade appliances for hogs and corn and who price-tagged his appliances in terms of "hog pounds" instead of dollars, therefore highlighting the present highly favorable—to the farmer—relationship between prices for farm products and appliance prices. Story of this promotion made newspapers all over the country and a special write-up in Time magazine. A story also appeared in the Dec. 29 issue of the

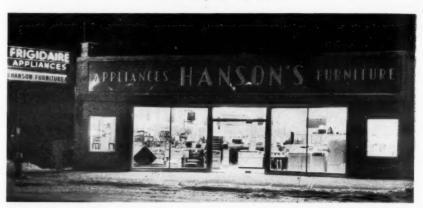
A visitor to the Winter Marts here, Hanson related how he and his wife were discussing a theme for a fullpage advertisement with the advertising solicitor for the local newspaper, when Mrs. Hanson proposed the idea of offering appliances for actual barter in corn or hogs.

"The advertising salesman - a young fellow not too long in the business-was amazed and a little scared at the idea at first," chuckled Hanson. "But after all, it meant selling a full-page ad."

Mrs. Hanson's participation in the conference out of which came the idea for the now famous promotion,



C. J. Prashaw (left), manager of Frigidaire range and water heater sales, views the original full-page newspaper advertisement that launched the "corn-hog sale" promotion that brought recognition in newspapers and magazine across the country to Dealer John Hanson of Forest City, Iowa (right). With Hanson is his wife, whom he credits with thinking up the idea.



How progressive Hanson is is demonstrated by his store. Only trouble with the fine, all-glass display front, he says, was when he closed the glass doors after having them open all summer. Some customers were so intent on the displays inside they tried to walk right through the glass. Waist-high signs on the door have remedied this.

was no happenstance. She takes a keen interest in the business, and her husband credits her with many other ideas that have brought customers into the store and made the Hanson's store one of the best-known retail establishments in the area. The

Hansons are believers in advertising and promotion—spending some \$4,000 in the past year. While one of the prime purposes of the copy was to show the farmer the "bargain" value he was getting in buying appliances under current price ratios of farm products vs.

appliances, it was also a solid barter

offer designed to encourage immedi-

ate trading. Hanson offered a fixed price on corn-per-bushel and hog-per-pound basis. The market price on hogs slipped a little on the day that the advertisement appeared, and some canny farmers in the vicinity were quick to take advantage of the barter deal to make a little extra profit on the barter deal.

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"But what the heck did you do with the hogs?" asked a self-pro-fessed "city feller" who was listening to Hanson unfold his story at the Marts.

"Why just a little way down the street is one of the biggest hog markets in the whole area," Hanson smiled. "The market took them right off our hands."

The Hansons played the advertisement and the attending publicity for all it was worth, calling attention to it again recently by offering to pay 25 cents for all copies of the advertisement that would be turned into the store.

REFRIGERATOR



BONDERIZING Holds Paint to Metal . . . PARKERIZING Inhibits Rust . . . PARCO LUBRIZING Retards Wear on Friction Surfaces

In selling home equipment, finish is a big factor. It has to look well to sell.

And it has to keep its good looks through years of service if your customer is going to be satisfied.

When the product is Bonderized, you can assure your customer (and yourself) that its fine appearance will last. Bonderizing builds a nonmetallic coating of phosphate crystals over and integral with the metal surfaces. These crystals give the paint a firm anchor, resist corrosion, and promote customer satisfaction by preserving and protecting the finish.

Use this sales feature to help you sell. You'll find that your customers know Bonderizing by name, and prefer it from experience because it makes finishes last longer.

Bonderite, Parco, Parco Lubrite - Reg. U. S. Pat. Off.

PARKER RUST PROOF COMPANY 0000 East Milwaukee Ave. Detroit 11, Michigan

This chart, prepared by the "Chicago Market Daily," shows in graphic form the point that

1941 ELECTRIC 220 LB RANGE 1947 In Forest City, Iowa, Furniture Dealer Americana (120 John Hanson dramatized the U.S. farmer's prosperity in a new way. He scrubbed IN CHANGE prosperity in a new way. The scrubbed the dollar signs off his price tags, substituted a figure in hog-pounds. When TOASTER one of his customers came in with a load of fourteen 220-lb, hogs, Dealer Hanson did a little quick figuring. At 1941 prices, he pointed out, the hogs would have bought one 9-cu. ft. refrigerator. Last week the customer got not only the refrigerator, but an electric range, an automatic toaster-and \$20 in change. Clipping at Left from "Time" December 15 issue

Dealer Hanson was making in his promotion. Clipping is from "Time" magazine story.

Populace of Small Town In Amazon Valley Flocks To See First Walk-In

US

SMYRNA, Del.-One of the first walk-in refrigerators known to have penetrated the deep Amazon valley of Brazil, South America, made its appearance at Belem, Brazil, at the establishment of A. S. Peres, a proprietor of the town's largest and leading food store and cafe.

Belem, located at the headwaters of the Amazon, is the port from which jungle explorers and hunters begin their jungle expeditions.

According to information supplied by the Gardiner Trading Corp., 29 Pearl St., New York, export agents for Wilson Refrigeration, Inc., this equipment was installed by the Previtali Corp., 9 East 59th St., New York, and is the first such refrigeration unit to appear in this Amazon area.

Peras stated that "the use of large walk-in refrigerators is a new and unknown field in Belem." Previous to the installation of the Wilson "Stor-Safe," the bulk of fresh food stuffs sold were either freshly butchered meats or fresh picked fruits or vegetables. Storage refrigeration such as the American public has accepted as part of their everyday life, are now just being introduced here.

"The innovations of being able to have food which is not necessarily freshly slaughtered or picked is quite a novelty to the people of Belem," Peres said.

In typical Latin-American custom, Peres' store is both a food store and a cafe. Due to this fact, Peres pointed out that his grocery customers come to see his new walk-in refrigerator and to purchase something which is stored in it, while his food customers demand to have food stuffs served which have just come out of the Wilson Stor-Safe. Peres mentioned that not only have the town folks shown considerable interest but many of the communities and towns in the area have sent in inquiries or sent representatives to ask about this new refrigerator.

The municipal board of the city of Belem, was so impressed with the new walk-in refrigerator that they are planning to have three additional Stor-Safe's built for them.

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There was so much local interest in the new refrigeration product, that Peres' main street store on the Avenida da Republica was continually crowded with people and it was necessary to spend a good deal of time explaining to the populace how the Stor-Safe worked and what it could do.

Air Conditioning & Heating Supply Co. Set Up In Kentucky

COVINGTON, Ky .- The Air Conditioning and Heating Supply Co., Covington has been incorporated under Kentucky law with 100 shares of no par value. Incorporators listed were J. A. Russell, Norman Bennett and Joseph J. Huesman.





Named by McQuay



P. S. MORRIS Vice President

H. B. THOMAS Gen. Sales Mgr.

Morris, Thomas, Coones Assume New Positions

MINNEAPOLIS—Philip S. Morris' election as vice president of McQuay, Inc. tops a list of personnel changes recently made by the firm. In his new post Morris will have charge of advertising, purchasing, and credit. Other appointments named H. Blake Thomas general sales manager and D. F. Coones assistant secretary. Morris, who joined McQuay a year

ago as assistant to the president, formerly was executive vice president of McQuay Aircraft Corp.

Thomas moves up from assistant sales manager, succeeding R. C. Colman who is retiring after 15 years with McQuay. Colman will remain a vice president and board member. During the war Thomas held the position of general sales manager for Chronomatic Corp.

Coones has been with McQuay for the past five years and formerly was controller.

Brewer-Titchener Reflects Optimism over '48 Sales

BINGHAMTON N. Y. - Fred A. Ellis, manager of the Brewer-Titchener Corp., is optimistic over 1948 business prospects. Says he:

"We still have a heavy backlog of orders for farm and home freezers, so we are assured of continued heavy demand for our products. Steel is difficult to obtain, but we have been fortunate in this respect so far."

Fairchilds Will Direct Weatherhead Advertising

CLEVELAND — Appointment of Don R. Fairchilds as advertising manager of the Weatherhead Co.

here has been announced by Hayliger Church, vice president.

Fairchilds was formerly sales promotion manager for the F. C. Russell Co. He has also served as advertising and sales promotion director of Jack & Heintz

D. R. Fairchilds

Precision Industries and did advertising work for Pump Engineering Service Corp. He will direct Weatherhead's en-

tire advertising and promotion efforts. Weatherhead manufactures valves, hose connections, tube fittings, and allied products for the refrigeration, automotive, aircraft, and bottled gas

Bad Wiring Causes \$150,000 Vancouver Locker Plant Fire

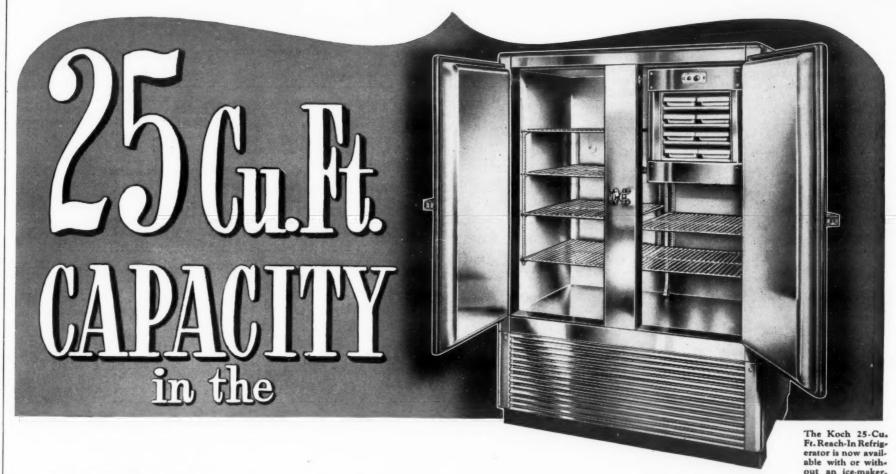
VANCOUVER, Wash. - Fire damaged the Economy Food Lockers plant to the estimated extent of \$150,000 here recently. Defective wiring was cited as the cause of the blaze, which swept through the plywood lockers of one unit of the twounit building.

Harry Porter, owner, said that he carried \$50,000 insurance on the building, but had no coverage on the contents. Loss of contents was not in the \$150,000 estimate.

Lincoln City Council Amends Code Covering Service Work

LINCOLN, Neb .- The city council has amended a proposed electrical code ordinance to provide for excluding refrigeration manufacturing firms from requirements that they obtain the services of a licensed electrician for manufacturing and repair work of refrigeration and air conditioning equipment.

BG Get it occupies only 9 Square Feet of Floor Space



INLESS STEEL REFRIGERATOR

Here is the refrigerator that your customers have been waiting for. The capacity is a full 25 cubic feet of serviceable, accessible, refrigerated storage space in a minimum of floor space. It has the features that sell. A continuous wall of 3-inch thick insulation keeps operating costs at a minimum. The oversize, 1/3 h. p. condensing unit freezes the full ice cube load of 216 ice cubes weighing 21 pounds in a remarkably short time. The stainless steel cabinet is welded into a single self-supporting unit. Your customers will like the modern appearance of glistening stainless steel that can't chip or crack; that will give a lifetime of service. KOCH invented the design of this refrigerator during the

war to meet battle conditions aboard warships, aircraft carriers, and submarines. The United States Navy is using thousands of similar cabinets made by KOCH. This is the first time such equipment has been available to civilian users.

Operators of restaurants, hotels, hospitals, and every type of business using refrigerators find that the KOCH 25-Cu. Ft. Stainless Steel Refrigerator does more, at lower cost. KOCH Refrigerators are the choice among those who insist on more refrigerator capacity in a minimum of floor space. Let your customers know that the KOCH 25-Cu. Ft. Reach-In is now available . . . then watch those big crowds gather, and too watch your sales curve go up . . . way up!



Meats In Frozen Storage

Tests at Penn State College Show That Properly-Wrapped Meat Is More Tender, Less Rancid at Lower Temperatures

STATE COLLEGE, Pa.—Results of recent research in the "ailments" developed by frozen meats that affected their economic usefulness were outlined by P. T. Ziegler, of the Pennsylvania State College department of animal husbandry, at the third annual frozen food conference held here recently.

In his talk, Ziegler discussed the cause of rancidity, freezer burn, proper temperatures, factors affecting the storage life of meat, factors which stimulate oxygen absorption, and salted meat.

Said Prof. Ziegler in his address: The storage of meats at sub-freezing temperatures is not new. It simply is reaching maturity.

Its rapid growth during the past seven years was accompanied by certain ailments developed by the products that affected their economic usefulness. This necessitated a search into the causes for these conditions and the measures that must be taken to combat or rectify them.

Fat, Salt Hurt Flavor

For example, the consumer of frozen meats complained that the fat on meat cuts held for the longer periods had an off flavor and that pork and salted meats were particularly subject to this condition. The processors needed some right answers and quick.

Now this was an old subject for the chemist who specialized in fats. His explanation was simple, that is, if you know chemistry. It hinges primarily on the life giving oxygen in the air. Life giving to us but an arch enemy of certain kinds of fats.

These certain kinds of fats are prevalent in meats and have the ability, because of their chemical structure, to absorb oxygen. However, in so doing, their structure changes, and the products that are formed are, in most instances, no longer pleasing in taste or odor. We call it oxidative rancidity. The solution, therefore, was to exclude the air from the meat to be stored.

Again the chemist came to the rescue by developing wrapping mate-

rials that had low moisture-vapor transmission qualities. If it had these qualities it would also be practically air tight. Considerable experimental work is in progress or has been completed on the value of different type of containers and wrapping materials.

Good Wrapping Material

The type that will eventually prevail is the one that is sturdy; will withstand low temperatures without cracking; is pliable and will fit closely to the meat, avoiding air pockets; one that is non-absorbent; odorless; non-toxic; will peal from meat when frozen; is grease and stain proof; will be easy to mark for identification, and above all, will have low moisture-vapor transmission qualities. Research to date has indicated that the foils and the films (including cellophane) are the most efficient wrapping materials.

The matter of moisture loss, alias dehydration, dessication or freezer burn which causes meat to become dry and stringy was the co-beneficiary when these wrapping materials came into use.

However, a good wrapping material will not serve its full purpose if it is improperly applied by the operator. The finest shingles, improperly laid on a roof, might still leave a leaky roof. It is important, therefore, to exclude as much air from the package as possible and put an air lock on the folded wrapping.

Must Stand Rough Handling

It is conceded that the confectioner's apothecaries or drug store wrap is the most efficient and requires the least wrapping material. But packages so wrapped will not stand rough handling and generally require an over-wrap which can be cheaper locker paper.

Heat sealing is possible with cellophane and some of the films but is not possible or necessary with the foils which will remain creased. The laminated foils and laminated cellophanes can be tape sealed.

Immediate

Delivery

with A PLUS SERVICE

lockers or a carload—we offer further cooperation—ALL MASTER

DRAWERS WILL BE COMPLETELY ASSEMBLED. This will tend

to relieve the present labor shortage situation. This service will con-

tinue as long as it does not affect or conflict with the freight rate

situation. Better order your needs today of

In addition to shipping any time, on time—one locker, 100

Our present knowledge indicates rather definitely that zero is the highest safe temperature to use. Rancidity is progressively lessened and the storage life of meat is proportionately lengthened with the use of lower temperatures.

The limiting factors in the use of temperatures such as -20 to -60 $^{\circ}$ F. in our household freezer cabinets or commercial freezer lockers is the high cost of the equipment and the greater operating expense.

It is highly probable that -10 to -20° F. will eventually replace the zero storage if the results of the research work now in progress warrant the lower temperatures.

Holding Aids Oxidation

Experiments to date show that the length of the holding (ageing or ripening) period has a direct bearing on storage life because it permits oxygen absorption by the exposed fat. This raises the question whether meat that is to be frozen should be aged.

The results of the work at several stations show no significant difference in the tenderness of meat aged 7 to 14 days and then frozen as compared to meat that was chilled 48 hours and frozen.

In our own work it was found that the aged meat showed higher peroxide values and shorter storage life than the 48 hour chilled meat. It also showed that although the ripened meat was slightly more tender during the first month of storage, this advantage disappeared in the subsequent months, the fresh and aged meats being on a par for tenderness. It has been proven that freezing is a tenderizing process in itself.

These things being true, ageing meat for the development of flavor, aside from its tenderizing effect, becomes a questionable practice for meat that is to be held in zero storage more than 8 months.

Temperature and Tenderness

It may be of interest, to give the results of a test run at this station on the effect of the freezing temperature on the tenderness of meat.

We had read where a scientist predicted that in the not so distant future there need not be such a thing as tough meat. When subjected to temperatures approaching absolute zero, all meat would be made tender.

We felt encouraged and slaughtered an eleven year old Angus cow. The carcass was chilled for 48 hours and steaks were cut from the top round. Three of these steaks were frozen at -110° F., the lowest temperature we had available and some 300 degrees from the absolute. The other three were frozen at 0° F. All six steaks were stored at zero.

At the end of one month, the test showed the steak frozen at -110° F. to be the more tender but it was far from being that tender that it could be cut with a fork. At the end of six months of zero storage, the -110° F. and zero frozen steaks were of the same tenderness but the low temperature steak was not as juicy. The same was true at the end of ten months when both steaks were beginning to show a slight degree of rancidity.

Long Storage Unjustified

This leads me to make a further statement. There is seldom any economic justification for any meat to be stored for a period over ten months.

The fact that we held pork, double wrapped in cellophane for a period of four years and were able to eat it without a clothes pin on our noses, is no justification for the practice.

What about the fat on meat?

Again the results indicate that it is advisable to trim closely before freezing. That fat probably won't be eaten even if it is palatable; it will taint the lean if it oxidizes, and it takes up that much more storage

space.

In the case of pork, the nature of the fat makes it more vulnerable to oxidation and therefore lowers its storage life below that of beef, veal, and lamb. It is very important, therefore, to trim closely or to freeze only those cuts that are quite lean.

For example, tests on sausage of different degrees of fatness showed

that the lean sausages had longer storage life than those containing more fat. It has also been demonstrated that pork that was frozen at the end of 48 hours of chill had longer storage life than pork that was chilled for 7 to 14 days before it was frozen. The same was true of the sausage made from such pork.

Unseasoned Sausage Best

Increased temperatures accelerate oxygen absorption. Nitrites used in curing meat products make for more rapid oxidation. Ultra-violet light used in the sterile lamps that are part of the equipment of modern coolers are reported to accelerate oxidation. The minerals copper, iron, manganese, cobalt, and lead are also guilty. Salt has been found to increase the rate of oxidation in fats.

This station corroborates the work of freezing seasoned and unseasoned sausage done by other stations and advocates the freezing of the unseasoned sausage meat.

It is true that pepper and sage appear to have antioxidant qualities and may be added before freezing but since they are such a small part of the seasoning and more difficult to mix with the sausage than if they were incorporated with the salt, we find it labor saving to add it after the sausage is thawed before cooking. Freezing also weakens the sage flavoring.

Oxidizing Rate Doubled

The use of chemically pure salt had the same oxidizing effect as common table salt or the flake curing salt. Salt alone added to sausage doubled the rate of oxidation as determined by peroxide values when compared to sausage seasoned with salt, pepper, and sage. The addition of iron or copper with the chemically pure salt increased the rate of oxidation.

The addition of antioxidants to seasoned sausage has been tested with little success. Two per cent of Avenex No. 7 added to seasoned sausage did increase its storage life. Avenex concentrate, oatmeal, ground whole wheat, soybean oil meal, and soybean lecithin had no significant effect.

The addition of sugar to sausage shortened its storage life. Smoking gives meat antioxidative qualities that are reported to practically double its ordinary (not freezer) storage life.

Tests made on freezing cured and smoked hams and bacons were not favorable. The unfrozen cured and smoked bacon at 50 to 70° F. was far superior in flavor to the frozen product after 8 months of storage. Freezing appears to retard the enzymatic action that produces good ham flavor.

Liver pudding proved to hold more of its fresh flavor when stored at 0° F. for 6 months than did scrapple. This was due to the ability of liver to holds its high flavor under freezer storage conditions.

In every instance the cellophane and foil wrapped liver pudding and scrapple meats were far more edible and showed considerably less moisture loss than the wax locker paper wrapped samples.

Practically the only difference in liver held at 0° F. in the wrapping materials was in its juiciness or dryness. There was no effect on its flavor. The ice glazing of meats worked very well as far as retarding oxidation was concerned but it was rather bothersome to have to reglaze the cuts every 2 or 3 months.

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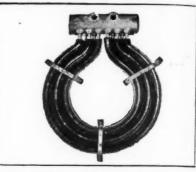
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The use of a lard glaze was very unsatisfactory. It was not only messy but the principle itself is wrong since we are adding the fat that is one of the causes of oxidation. The original purpose of the lard coating was to eliminate freezer burn and it did that rather well.

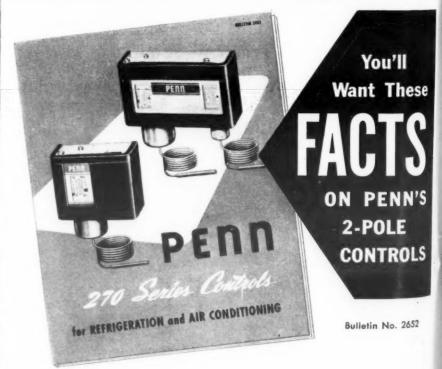
ROME-CONDENSER * Jointless Type *



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers

ROME-TURNEY RADIATOR COMPANY

222 CANAL ST. ROME, N. Y.



In this Bulletin you get the full story of the PENN 270 Series Control—the first and only refrigeration and air conditioning control to feature a load-carrying, 2-pole switch.

Send for your copy now. You want the facts about the control that has set the industry talking—that establishes a new standard of simplicity, efficiency and dependability for a wide variety of applications.

The PENN 270 Series is really two switches in one, yet you get this plus value without paying a premium. Mail a postcard or letter now—for Bulletin 2652—Penn Electric Switch Company. Goshen, Indiana. Export Division: 13 E 40th St., New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ont.

In Booth 1011 at Cleveland The PENN 270 Series will be featured in our display at the 5th All-Industry Refrigeration and Air Conditioning Exposition,

January 26-29.

MASTER MANUFACTURING CORP.

assembly.

121 Main Street

Sioux City 4, Iowa, U.S.A.

while our exceptionally large stock

of steel makes prompt shipment possible. Steel shortage is acute—but

we've got it plus the facilities to

WIRE, PHONE, WRITE

Don't fail to advise how you want

drawers assembled. We'll follow

your instructions as to height of

Endorsed by and sold through distributors of

refrigeration and insulation.

fabricate it promptly.

Member of Frozen Food Locker Institute organized for your protection.

Over 1,000,000 Master Food Conservators in Use

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORI

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DETROIT-"Current national expansion plans of the Frigidaire Division of General Motors call for a twofold increase in its commercial refrigeration and air conditioning sales volume in 1948," according to R. F. Callaway, Detroit branch manager, recently returned from a Regional commercial meeting in Dayton, Ohio, for key personnel.

Tracing the rapid growth of Frigidaire's commercial business, he pointed out that 1947 sales volume amounted to twice that of 1946 and nearly three times that of 1940.

Callaway said that production of commercial products is being stepped up as fast as circumstances permit. "Frigidaire is back in nearly all phases of the business," he declared, and is planning to reach out into even more markets than ever before. We are now selling display cases, reach-in refrigerators, compressors, wet and dry beverage coolers, milk coolers, ice cream cabinets, water coolers, cooling coils and other equipment for commercial and industrial

"Progressive strides are being made in the air conditioning field by Frigidaire," Callaway continued. 'We are introducing a new selfcontained five-ton capacity store conditioner and expect to have a complete line of equipment ranging from packaged room coolers to large central air conditioning systems for homes, stores, offices, and business

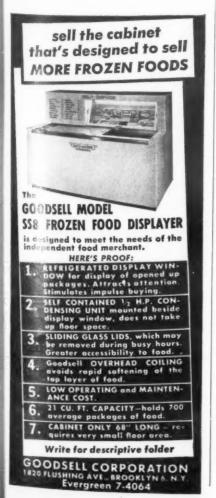
Intensified sales, service training, and advertising programs, geared to fit 1948 planning, were outlined during the two-day meeting. A new retail sales plan was introduced along with over-all organization and franchising programs. Slide films portraying the company's extensive new commercial products were shown.

Similar meetings are being conducted in New York, Atlanta, San Francisco, and Dallas this month as a part of Frigidaire's extensive expansion program in the commercial refrigeration and air conditioning

Krauss Succeeded by Youse As Manager of Gilmer Div.

PHILADELPHIA-John S. Krauss has retired as manager of the L. H. Gilmer division of United States Rubber Co. here, after 35 years of service. He will be succeeded by Lawrence K. Youse, former technical superintendent of the V-belt plant and recently assistant manager.

Krauss started his career in 1912 as an assistant to L. H. Gilmer, who was in the process of expanding production of belts which he had invented while working as a printer Philadelphia newspaper. Krauss helped to develop the early automobile fan belt and many other special belts for machinery.



Frigidaire Set To Double Reincorporation of United Refrigerator Announced as J. F. Ganley Retires

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25, ILLINOIS

ST. PAUL, Minn. - The United Refrigerator Mfg. Co. has been reincorporated as the United Refrigerator Co. due to the retirement of J. F. Ganley, president of the manufacturing division, R. S. Wieding, president of the firm, has announced.

Wieding further announced that Leonard Shapiro and Louis Rosenfeld of Chicago have acquired an interest in the company and will be actively associated with its future manage-

Officers of the new company have not yet been revealed. However, Wieding stated that "the new officers and directors soon to be announced are young, progressive, forward looking businessmen, and with their added stimulus, I look ahead with complete confidence to the future and the realization of a life long ambition to build one of the best and most complete lines in the commercial refrigerator market."

Wieding pointed out that his own position will remain unchanged. Though expansion of the company's labor and office force is anticipated in order to meet a greatly increased demand for United products, Wieding emphasized that no changes in personnel of any kind have been made and none are contemplated.

He noted that sales during 1947 were up 400% over 1941. United

cabinets are now sold in every state of the nation, and in Mexico, South America, Europe, and the Orient, he

United Refrigerator Co. manufactures a complete line of commercial refrigerators including beer dis-

Cate-McLaurin Co. Announces \$22,000 Construction Plans

COLUMBIA, S. C. - The Cate-McLaurin Co. has just announced plans for construction of a new refrigerator sales and service department and warehouse at 1724 Taylor St. here at a cost of more than \$22,000.

The company will move its refrigerator service department from 420 Main St. to the new location. Cate-McLaurin's refrigerator sales department is located at 1233 Hampton St.

Omaha Company Charged With Violating Labor Act

OMAHA, Neb. - The Wage and Hour division of the Department of Labor has filed a federal injunction suit against the firm of C. A. Swanson and Sons, one of the largest cold storage and frozen foods processing companies in the country, with headquarters here, in an effort to enjoin the company from "violating the Fair Labor Standards Act."

It has been charged that employes are not being paid for time spent in changing their clothes at the plant.

Vice president G. C. Swanson testified that "it has been the firm policy of the company that the employes put on their uniforms before checking in and take them off after checking out."



INSIDE DOPE by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1) He was as single-minded in his determination to sell cash registers to every business in this country as Cecil Rhodes was to annex South Africa for Britain. In many respects the men were similar. Both were empire builders, one financial and the other territorial. Both were dictatorial, even ruthless. But both were brilliant, successful men.

Patterson, the phenomenon of American business, was a paradox. He was the first employer to effectually consider the comfort of his employes. Because he saw a woman worker warming her coffee on a radiator he built one of the first company cafeterias in existence. It was the same man who hired a masseur as general manager of his firm because he had literally rubbed him back to health during an illness and who fired all the employes of his power house because they tooted the whistle when he was trying to make a speech.

Patterson is credited with originating successful direct mail pieces, the "canned" sales talk, sales conventions, the sales manual, and literally scores of sales tricks, tips, and devices.

The history in this book is the story of Mr. Patterson's struggle to build his business. The education comes from the methods he used and includes descriptions of later elaborations and developments of his sales And the jokes and the anecdotes appear on every page. Every conceivable method ever used to develop sales is herein described and many actual case histories are used as illustrations.

Names familiar in the appliance world appear frequently. By oldtimers they will be quickly recognized; new comers will find them introductions to the industry. Some of them have even contributed short passages to the book. Walter Daily, for example, writes of the importance of strategy in advertising. Others have contributed innumerable anecdotes which point up author Taubeneck's lessons. The lessons, incidentally, are one of the beauties of the book. They sneak up on the reader like a sunburn-and are just as hard to forget.

Mr. Taubeneck himself says in his introduction: "Textbooks . . . are seldom read by those who need such information most . . . Good salesmen like to spend their time with people, not books . . . So this book-which attempts to define, outline, detail, and humanize 'creative selling'-has been written in three dimensions. We've tried to present our back-toproven-fundamentals sales planning information in narrative form. We've tried to erect these fundamentals on the solid rock of proven tradition . . . Pattern for each chapter, then, is this (1) How did Patterson do it, and what did he say about it; (2) how has it been done best by modern specialty selling organizations; and (3) what humorous incidents have we heard which drive home these points?

"One Foot in the Door" has all the answers to a salesman's questions. And what's more, it's a hell of a lot of fun.-Robert W. Armstrong, Electrical Merchandising (McGraw-

All About Specialty Merchandising

Many a successful merchandiser learned how from John H. Patterson of National Cash Register, who insisted that salesmen must be trained and taught and who beat fundamentals into their heads with chalk talks and sales conventions. Patterson had been a school teacher-in the days before kindergartens and making education easy and attractive. Now the best of Patterson's methods are presented with a suitable up-tothe-minute admixture of witty presentation and illustrative jests in a fat book called "One Foot in the Door-All about Specialty Merchandising-Including the Laughs."

Making it sound easier, making it seem more attractive, livening up the fundamental formulas with funny stories-that's the work of the author, George F. Taubeneck, who at 37 has just finished his 15th year as editor of AIR CONDITIONING & REFRIG-ERATION NEWS, a spot where he has had (and very evidently seized) a lot of opportunities to know all there is to know about specialty sellingincluding the important lesson that even if selling and promotion is not a game, there is a lot of fun in those jobs, and even in learning those jobs-Printer's Ink.

Sugar-Coated Selling

Only the farmer's daughter is missing from a chuckle-filled work on specialty selling entitled "One Foot in the Door."

Just about every phase of specialty selling is covered in this new book by George F. Taubeneck. It's equally valuable for recharging the thinking of the seasoned executive in sales, advertising and sales promotion-and for the rising young merchandiser or member of the sales force.

All the time-tried principles and technique are here, pointed up and made easy to take by a choice selection of club-car stories.

Although much of the book tells how it was done first by the late (and unorthodox) John H. Patterson of National Cash Register, it still gets down to cases with sound counsel on direct-mail selling, testimonial advertising, industrial publicity, house organs, and the use of visuals.

"One Foot in the Door" also covers the preparation and use of the canned sales talk, how to get results out of a sales convention, and some fundamentals of copy-writing. Many of its 386 pages are devoted to the retail side of sales promotion. The price is \$3 per copy, postpaid. Source: Conjure House, 450 West Fort Street, Detroit 26, Mich.—Tell.

'One Foot In the Door'

As the title implies, this is a book about salesmen. More accurately, it's a book about sales methods and successful merchandising. In a delightfully interesting manner, the author has delved into the romance of sales promotion and come up with a book on successful sales methods and merchandising that should make profitable reading.

George Taubeneck, the author, is the editor of AIR CONDITIONING & REFRIGERATION NEWS. In his 15 years in this post he has accumulated a wealth of tried and successful sales methods and has sprinkled his material with an abundance of humorous

"One Foot in the Door" then, is not a dry treatise on selling or sales promotion, but is instead an amusing book that will be enjoyed by anyone interested in persuading the consumer to buy. The theory in presenting humorous stories throughout the book is that a man likes to remember funny stories. The stories, in turn, will tend to make him remember the lessons involving the story.

Among chapters are: a chapter on window display; one dealing with employe suggestions campaigns; selling abroad, direct mail, publicity, sales manuals, and sales training schools; necessary procedures in preparing complete advertising, promotion, sales training material for the introduction of a new specialty product or model.

Because few of us can remember back when Hector was a pup, there are a lot of comparatively new ways we take for granted. I wonder, for instance, how many men on the sales side of industry realize they owe their shirts, trousers, and shorts to one John H. Patterson, ruler of the National Cash Register empire for 38 years.

Now that time has softened his associates' bitter memories, and Patterson can be seen as part of an era, George Taubeneck has built the Patterson legends into a book which will interest every member of the sales and advertising fraternity.

There's an old Greek myth about Minerva, the Goddess of War, who sowed nine seeds which sprouted into nine armoured warriors. John Patterson is the American Minerva, for in his mind were planted the ideas which developed into sales management as we know it today. There's hardly a selling device now in use which was not Patterson-conceived. Practically alone he developed a full blown system for merchandising and selling our mass production output. From testimonials and catchy window displays to conventions, contests and planned (or canned) sales talks, Patterson heads the field. And he developed men, too. Another miracle merchandiser, IBM's Thomas Watson. went over Patterson Falls in a barrel.

So did Charles Kettering.

"One Foot in the Door" tells all kinds of stories in addition. Some. times a dynamic man gets caught in a dull book, but this isn't the book For the author has suited his style to his subject.-Mathilde Zwilling, Sales Management.

Another Bible

George F. Taubeneck is editor and publisher of AIR CONDITIONING & REFRIGERATION NEWS, and is well known throughout the business men's world for his forthright, chatty, weekly column "Inside Dope." Right or wrong on economics, it must be admitted that Mr. Taubeneck can spin an entertaining yarn; and he has done this, to anyone's heart's content, in "One Foot in the Door."

This book may well become the appliance salesman's bible, for it gives many pointers in the human nature of salesmanship that should certainly make less painful the part. ing of a customer and his funds.

The first two chapters of the book give us a glimpse of John H. Patter. son, the one-time president of Day. ton, Ohio's National Cash Register Co., and the man who has been credited by many with inventing (or discovering) the specialty merchan. dising art. Taubeneck continues his story under such topics as "Hair Grows on a Billiard Ball," "Publicity Isn't Always Free," "Everybody Loves a Convention," "Five Will Get You Ten," and many other equally absorbing chapter headings. Interspersed through the book-in fact it might be said the factual matter is interspersed in the fun-is a never-ending series of anecdotes.

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There is nothing textbookish about "One Foot in the Door." It is much more than just a book of laughs. For the reader who wants to develop a typically American selling technique, the book gives many valuable pointers and suggestions.—Refrigerating Engineering.

This Is a Funny Book

"One Foot in the Door" by George F. Taubeneck, Conjure House Division, Business News Publishing Co., Detroit, \$3.00, is a recommended book.

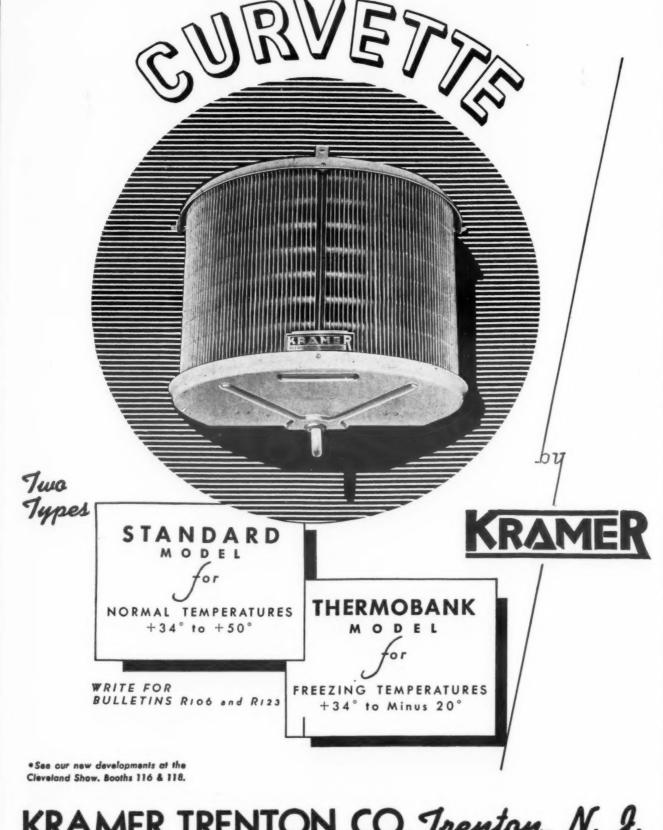
During my wartime experience with the Red Cross overseas, it fell my lot to explain to a lanky Texas major the process through which he might obtain an emergency leave to the States. I told him how the request must first be approved by his commanding officer, then cabled to Washington for investigation by the Red Cross chapter in his home town, or by the chapter nearest the town.

Then realizing the investigation would take longer to come through if a field director had to go out from one of the cities to make the report, I quietly asked, "Ross, what big town is Lubbock near?"

For several minutes this loyal son of the Lone Star State looked me coldly in the eye before he finally exploded, "Lubbock is a big town!"

Which brings me around to the point (and you can't help thinking in terms of anecdotes when you read this book) that the field of specialty selling is indeed a big one, and George F. Taubeneck, Editor and Publisher of AIR CONDITIONING & REFRIGERATION NEWS, has done 8 masterful job of handling a big subject in his book, "One Foot in the Door.'

We are pleased to add our recommendation to those who have previously praised "One Foot in the It's fun-it's interesting-Door." it's informative. And while several chapters deal with industry problems more from a manufacturer's point of view, there are many other chapters of down to earth advice on salesmanship, advertising display, contests and promotions which will be a benefit to every Electrical Retailer in the country, regardless of the size of his store and his town.-Vivian Acord, Electrical Retailers



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A model demonstrates one of the methods by which dealers can display the Disposall to advantage. Using the special stand helps to bring the garbage disposal unit out in the open where it can be noticed by passing customers.

Stand Resembling Cutaway Sink Helps Attract Disposall Buyers, Dealers Told

CHICAGO—A series of nationwide field meetings, designed to acquaint distributors and dealers with the merchandising qualities of the Disposall, are being carried on by Hotpoint, Inc.

Now that Disposalls are reaching distributors and dealers in larger numbers, Hotpoint is emphasizing the prominent display of the garbage disposal unit along with the company's other appliances which already have established a high degree of consumer acceptance.

H. C. Doss, manager of kitchen sales, said that postwar consumer interest in electrical automatic devices that reduce the homemaker's tasks has grown rapidly. Because the Disposall eliminates the need for garbage cans, it also has high consumer interest from the standpoint

of health, he said.

Dealers and distributors are being urged to reach the new home market. For years, company officials said, builders have sought new means of making their homes more attractive to prospective buyers. With the Disposall, builders are equipped to offer

a new attraction—entire elimination of the garbage problem. Architects should be informed of the Disposall's value in the modern kitchen, and they should be made familiar with specifications and installation data.

Aside from the new building program there remains "the vast, wideopen market of individual sales" for the Disposall. This category includes homemakers who are remodeling their homes, and those who are replacing obsolete or worn out equipment. These prospective buyers, Hotpoint officials said, are the people who enter the appliance store daily.

For this type of buyer there are three simple methods of selling the Disposall—use, display, and demonstration, Hotpoint is teaching.

Many distributors and dealers have failed to display the Disposall properly, Hotpoint spokesmen said, adding that in many instances a suitable display rack was not formerly available. Hotpoint is introducing a stand, resembling a cutaway sink, for mounting the Disposall in display windows or inside the store.

Demonstration, dealers are told, is

one of the most effective means of selling the Disposall. Using small wood blocks, vegetable tops, and navy beans to simulate bones and garbage, the dealer can demonstrate the Disposall while it is mounted on the display stand. The pulverized material then can be removed from a refuse bag connected to the appliance, and shown to the buyer.

Hotpoint has made available for its distributors and dealers five new selling aids in connection with the Disposall: Folders, wall charts, glass drain tubes, consumer folders, and servicegrams.

The field meetings point out that the Disposall is readily adaptable to any sink having a 3½ to 5-in. drain opening. The self-cleaning unit can also be used with a septic tank.

Westinghouse Appliance Division Adds 5 to Staff

MANSFIELD, Ohio—Westinghouse Electric Appliance Div. here has announced five recent appointments to its staff.

John Blaine Johnson, Jr., former service and project engineer with Surface Combustion Co., has been added to the refrigeration sales staff, and Dick Canfield Haynes has joined the special contracts department after serving as a junior engineer with the Newark Stove Co.

Frank Walter Loiko has been assigned to the advertising staff; Clark M. Unger, Jr., formerly with George Worthington Co. of Cleveland, has been named to the department and furniture store sales staff.

The laundry sales staff has added Robert B. Jurgens, former Mansfield Tire & Rubber Co. employe.

Electric Ranges Lead In Chattanooga Unit Sales

CHATTANOOGA, Tenn. — Nearly \$2,900,000 worth of major electrical appliances were sold here during the first 10 months of 1947, the Electric League of Chattanooga has reported.

Of this total, sales of refrigerators, ranges, and clothes washers equaled approximately \$2,400,000, according to the league's figures.

Sales of all residential appliances totaled \$4,236,663.27 for the 10 months and were expected to exceed \$5,000,000 by the end of the year.

Breakdown of major appliance sales for the 10 months period by unit and dollar volume follows:

	Units	Dollar
Appliance	Sold	Value
Refrigerators	3,568	\$914,680.17
Ranges	3,734	908,668.36
Clothes washers	3,669	590,290.81
Water heaters	2,440	272,946.31
Frozen food cabinets	302	94,246.46
Ironers	392	52,790.46
Dishwashers	90	27,778.67
Clothers dryers	75	16,553.66
Air conditioners	33	13,323.99

McCallie Electric Buys Nelson

GREENCASTLE, Ind. — Nelson Electric Co. here, has been sold to McCallie Electric Co. Floyd McCallie is the owner of the latter company, and he expects to operate the Nelson store at the same location, but under the McCallie name.

Electrical appliances will be featured at the Nelson store, as well as other electrical equipment, the Mc-Callie store devoting itself to general repair service.



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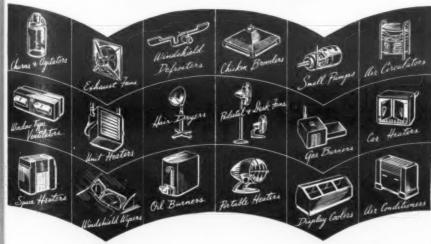


RALPH ATCHISON CARROL CONKLIN Feature at the second of t

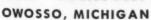


A great variety of famous products are powered by Redmond Micromotors. Shown above is the Redmond Type "T" four pole shaded pole A.C. Micromotor, built in sizes up to 1/25th horsepower. Other A.C. models are built in both smaller and larger sizes. Series and shunt wound D.C. Micromotors are built in sizes up to 1/20th horsepower for use in automotive applications.

Below are illustrated a few of the many products in which practical Redmond Micromotors are serving dependably.



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MICROMOTORS & CONTROLLERS & BLOWERS



Ralph Atchison... Carroll Conklin... Charles Schoen-holtz.... Three individualists, three free men, three rivals. Friendly rivals, true, but rivals nonetheless. Who bags the first buck? Who bowls the high game? Who holds the high card?

Atchison, Conklin, Schoenholtz. Collectively, they're first-string players on a big league team. Players? League? Team? You bet! They're "teammates" at Tecumseh Products Company and they're playing "heads up" ball in the smartest, fastest moving, most efficient productive league in the world . . . the American system of free competitive business.

Atchison, Conklin, Schoenholtz...individuals, rivals, teammates. Theirs is the pride and the spirit that has made America great. Theirs is the conviction that ... someday, if he's good enough, the water boy may pitch for his team.



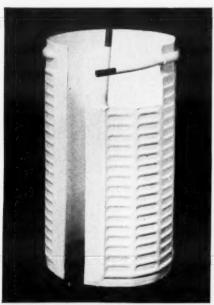
TECUMSEH PRODUCTS COMPANY

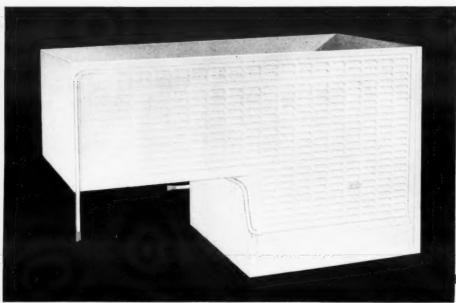
Tecumseh, Michigan

They'll Do It Every Time By Jimmy Hatlo



Do You Have 'One Foot In the Door'?

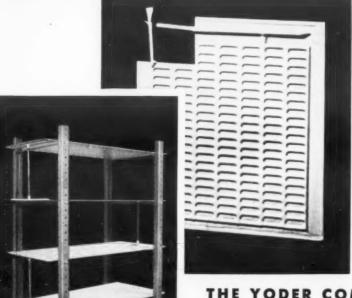






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In addition to a complete line of stock sizes of plates, shelves and plate banks, Yoder engineers and builds to order plates and liners for all kinds of food freezer cabinets, processing tanks, display cases, beverage and ice cream coolers and dispensers. We offer cooler and freezer manufacturers engineering service and estimates, to work out with them the most efficient and economical answer to their special problems. You may consult us freely, without cost or obligation.

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VOLUME 53, No. 3, SERIAL No. 983, JANUARY 19, 1948

1948 All-Industry Exposition Will Be 'Tops'--Come!

(Concluded from Page 1)

with the experts stationed at these exhibits, however, and no matter how much fun you may have at the entertainments, your biggest dividend from attendance at the All-Industry Show will likely come from your conversations with your fellow-workers in the business.

If you are the proprietor of a commercial refrigeration merchandising establishment in Elliopolis, Ohio, trying to break into air conditioning on the side, you'll run into Bill Twill, who has the same sort of operation in Peoria, Ill., and Sam Flam, who has sold display cases and store coolers to half of St. Louis.

If you are running a busy independent service firm in Nebraska City, you'll meet Joe Blo, who is doing the same thing in Bumphis, and any number of other good guys who have the same problems, the same trials, tribulations, and triumphs as you do. Just being able to trade experiences with these fellows will be wonderful.

Ever stop to think how lonely the proprietor of a specialized business gets? Nobody to talk to, who really understands his problems. Sheet metal workers have their unions, farmers have their granges, dentists and doctors have their societies (and so do engineers), and bankers have their clubs. But where can a commercial refrigeration dealer go to talk about the things that interest him most? There are luncheon clubs, to be sure. Much of the tremendous popularity of Rotary, Kiwanis, Lions, and similar clubs is due to a desire to alleviate this specific form of loneliness to which we have just referred. But although the men Mr. Commercial Dealer meets here do have things in common with him, they still can't talk commercial refrigeration.

Well, this All-Industry Exposition is just what the doctor ordered for the lonely commercial refrigeration dealer, and the serviceman. "Misery loves company," and such an assemblage always feels better after airing mutual troubles and discovering that a lot of other fellows have almost the same problems.

When they get to crying about these problems, though, one thing leads to another, and pretty soon one man's method for getting out of difficulties is traded for the other's solution to another common problem. Such trades aren't "deals"—they just "come natural."

As some sage once put it: "If I trade you a dollar bill for your product, you have my dollar bill and I have your product. That's even Stephen. But if I trade you my idea for your ideas, you have my idea, I have yours, and yet we still have our original ideas. So we're both ahead."

The 1948 Refrigeration & Air Conditioning All-Industry Exposition is sponsored by the Refrigeration Equipment Manufacturers Association (Rema)—the membership of which includes the leading manufacturers which fabricate complete equipment, component parts, and supplies to a magnificent industry. This group has a keen interest in the success of all other branches of the industry. The products of most Rema members are absorbed into the production of new equipment, also in the repair and replacement of old installations.

So, since the prosperity of the manufacturers of parts and supplies is dependent upon the activity of all other groups (including producers and wholesalers, contractors, dealers, jobbers, and servicemen) it is logical that the Rema organization should take the lead in promoting the advancement of the industry as a whole through this Exposition.

Come one, come all. "You can't miss it."

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at @ BOOTH NO. 504

TH ALL-INDUSTRY EXPOSITION . CLEVELAND . JANUARY 26 TO 29

See the great display of new developments in A-P DEPEND-ABLE Refrigeration Valves . . . Developments that will help you to improved refrigeration, simpler installation and servicing — greater customer satisfaction and steadier profits — during the years ahead.



Be sure to pick up your copy of the new A-P Condensed Catalog waiting for you at BOOTH 504.

AUTOMATIC PRODUCTS COMPANY

2450 NORTH THIRTY-SECOND STREET • MILWAUKEE 10, WISCONSIN
Export Department, 13 East 40th Street, New York 16, N. Y



REFRIGERATION VALVES

STOCKED AND SOLD BY GOOD REFRIGERATION WHOLESALERS EVERYWHERE . . . RECOMMENDED AND INSTALLED BY LEADING REFRIGERATION SERVICE ENGINEERS



TYPHOON AIR CONDITIONING CO., INC. Division of Ice Air Conditioning Co., Inc. 794 UNION STREET . BROOKLYN, N. Y.



Issued by Mfrs. Assn.

CHICAGO—"Better water for better living," is the theme of "The Water Cooler Story," a brief but complete booklet being issued widely this month by members of the Drinking Water Cooler Manufacturers Association, a division of the Refrigeration Equipment Manufacturers Association.

The first part of this attractive 28-page booklet is devoted to a thorough discussion of the importance of drinking water to health, efficiency, and morale. Actual quotations of health, industrial, labor and merchandising leaders are used to prove that it is a fact that it pays to encourage the drinking of more

The late Dr. John Harvey Kellogg is quoted as saying, "Anything you can do to increase the amount of water consumed by the American people will be a blessing to the country."

Having established the importance of drinking water as a means of improving health, increasing production, and building goodwill, the brochure states: "That is precisely the role of the water cooler. It encourages the drinking of pure water by providing an attractive, convenient, sanitary source of palatable and refreshingly cool water."

There are complete descriptions and illustrations of the general types of coolers on the market today and the booklet also offers factual advice on choosing the right type and number of water coolers to meet the requirements of various plants, offices, and other business establishments.

Suggestions are given on proper locations for installation, and floor plans are included of typical installations in large and small manufacturing plants, department stores, office buildings, filling stations, hospitals, small retail stores, and other establishments where water cooling equipment can be used.

Copies of the booklet will be distributed nationally by members of the Water Cooler Manufacturers Association.

WANTED—Manufacturer's Agent

Several good territories open for right men with good Dealer and Distributor contacts. Opportunity for excellent income handling fairly complete line of commercial Refrigeration and Refrigerator items of highest quality. Our present men know of this ad.

BOX NO. 2638

AIR CONDITIONING & REFRIGERATION NEWS



PRECISION-BUILT FOR LEADERSHIP AMONG TODAY'S FINEST FREEZERS

CHOICE TERRITORIES ARE STILL OPEN FOR DISTRIBUTORS AND DEALERS

Write for Technical Details and Sales Advantages

BEN-HUR MFG. CO. Dept. A.C., 634 East Keefe Ave. Milwaukee 12, Wisconsin

HEALTHFUL LIVING THROUGH FROZEN FOODS

'Water Cooler Story' Book 30,000 Laundromats Preaching Better Living To Self-Serve Laundries Is Westinghouse Goal

NEW YORK CITY-A minimum of 30,000 new Laundromat automatic washers in 1,000 new self-service laundries across the country is the 1948 goal established by the Westinghouse Electric Corp. laundry equipment department, I. Frank Brownson, department manager, indicated at a recent press conference here.

"We have more than a reasonable expectation that the goal will be exceeded," he declared.

The 30,000 unit production goal doubles the 1947 output, he noted. The 1947 production of coin-operated machines outfitted 600 self-service laundry establishments, he added.

Self-service laundries are accorded 10% of total sales by Westinghouse, Brownson explained. Even when unlimited numbers of Laundromats are available, the laundries' share will not exceed that percentage, believes.

Brownson declared that "by 1950, we are aiming at establishment of from 5,000 to 10,000 Laundromat Half Hour Laundries throughout the country. At the now generally accepted average of 30 washers to each store, this means between 150,000 and 300,000 units should be sold during that period.

Towns ranging from 1,000 to 1,500 population have been selected particularly as targets for the establishment of Half Hour Laundries, he intimated. They usually have no commercial laundry facilities or unsatisfactory ones, he noted.

However, he hastened to point out that urban areas will not be neglected.

Brownson pictured the operation of a self-service laundry as one requiring a rather considerable investment, but returned good profits.

"An operator who wishes to set up a Laundromat Half Hour Laundry must make a minimum investment of \$9,000 for equipment alone, exclusive of leasehold improvements, rent, and other items," he said.

"If he sets himself up in accordance with detailed instructions supplied by Ald, Inc. (coin-operated Laundromat distributor) a 30 machine operation, going at only 65% of capacity, will gross \$4,500 monthly based on depreciation of equipment over 36 months.

"This will net the operator \$1,500 monthly with a manager's salary included.

"Ald has found that outlets using both driers and ironers yield greater returns than those carrying washers alone."

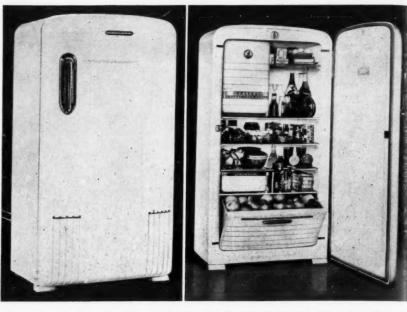
Brownson pointed out that Ald gives the new operator a complete research service before he opens his business. This service includes testing water quality in a given locality, testing soaps, promotion, and instructions in merchandising.

The distributor further conducts a continuous free training school and consultation service for operators and their employes, he said.

Albany Electric Supply Firm Incorporates Business

ALBANY, N. Y .- Tusang & Barhydt Electric Supply Co., 1236 Western Ave., has incorporated its business as Tusang-Barhydt, Inc. and is authorized to issue \$50,000 worth of stock at \$100 par value, according to papers filed with the Secretary of State. William R. Barhydt, George P. Tusang, and A. C. Lunden have been named as directors.

Leonard's Super Deluxe for '48



Above is the lowest price model in the Leonard "super deluxe" series. It features 8.5-cu. ft. capacity plus refrigerated Fruit Freshener at bottom, full length door, and stainless steel frozen food chest that will hold 40 lbs. of food and ice cubes. Price \$279.95.

Admiral Television Line Awarded Lion's Share Of Advertising Budget

CHICAGO-Newspapers will carry the largest portion of Admiral Corp.'s record-breaking advertising budget in 1948, it was announced by Ross D. Siragusa, president.

Of a total budget well in excess of \$3,150,000, newspapers will receive more than \$2,000,000 Siragusa said. In cooperation with Admiral dealers, advertisements will be run in newspapers in all sections of the country.

More than \$1,000,000 will be spent for space in 20 leading national magazines. This is the heaviest magazine schedule in the company's history. Two-thirds of the total will be spent in promoting Admiral's new "matched ensemble" television line, it was announced last week. The remainder will be divided about equally between radio and refrigerators.

An additional \$120,000 will be spent in farm papers, with emphasis on

Cruttenden & Eger is the agency.

C. E. Beeson Elected Pres. Of Southern Bearings & Parts

CHARLOTTE, N. C.-Clarence E. Beeson, an officer and director of the Southern Bearings & Parts Co., Inc. for 22 years, was recently elected president and general manager of the firm to succeed the late John H. Northey, Sr.

At the same time, Raymond L. Beeson, manager of the distributing firm's appliance division, was elected vice president, and Samuel L. Mc-Knight was named secretary and treasurer.

Clarence Beeson, McKnight, and B. W. Barnard, vice president and trust officer of the American Trust Co., who represents the Northey estate, comprise the board of direc-

President Beeson stated that there would be no change in the policy of the company.

The appliance division of the firm distributes Norge home appliances, Bendix radios, Ironrite ironers, and Regina floor polishers and vacuum cleaners in both Carolinas.

Wilson Wallace, Jr. is sales manager of this division and Vernon Jones is service manager.

Ingersoll Utility Unit Div. Formed To Manufacture, **Sell Consumer Products**

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CHICAGO - Expansion of Borg-Warner Corp.'s divisional structure to intensify manufacturing and selling of the Ingersoll Utility Unit is in progress, with organization of a new division in the hands of Roy C. Ingersoll, vice president of Borg-Warner and president of Ingersoll Steel Division.

The newly created division will be fully implemented to carry on manufacturing, sales and service operations for Ingersoll-controlled products classified as consumer goods while the parent division will retain its extensive contract manufacturing business which has caused its expansion in the last two years far beyond its wartime peak.

Direct management will be in the hands of Robert S. Ingersoll, a vicepresident of Ingersoll Steel, who is adding the title of executive vice president of the Ingersoll Utility Unit division. All the key personnel in the handling of the Utility Unit and other consumer products will be transferred to the new division.

The Ingersoll Utility Unit division has leased a six-story loop building at 321 Plymouth Court where it will consolidate management, sales and engineering functions now conducted at 310 South Michigan Ave. and 306 South Wabash Ave., Chicago, and Kalamazoo, Mich., and Evansville, Ind. The change is scheduled to be effective Jan. 5.

The new division will start with substantial backlog of orders for 1948, it was said. Installations during 1947 were made in 210 cities in houses priced from \$7,850 to \$15,000 and in two-story garden apartments. Most of the sales were made to operative home builders and building contractors through a special distributing organization which collaborated closely with master plumbers. In every city it encountered new experiences with local building codes and with installation sub-contractors, all of which had to be solved.

Roy C. Ingersoll said the company files were complete with distributional patterns showing the regional needs of home builders in all parts of the country, the diversity of building code variations and other data which had to be developed for the specific requirements of the Utility Unit.

STANDING INVITATION ...

to visit the Ranco Inc. exhibit (Booths 310-312) at the Cleveland ALL-INDUSTRY Show, January 26-27-28-29.

. . . and to rely on Ranco precision-bilt Refrigeration Controls for the dependable, efficient performance that pleases both you and your customers.



Modern Kroger Store Is 'Hall of Mirrors' Perrone Equipment Moving Maurice Reid Heads



Self-service display cases, mirrored views of their contents, and murals lend eye appeal to this display in the new Kroger store on the Country Club Plaza in Kansas City.

New Outlet Accents Refrigerated Display Cases To Gain Eye Appeal In Kansas City Grocery

KANSAS CITY, Mo.—A grocery store display with a touch of gift-shop artistry in arrangement and eye appeal has been made possible in the newest Kroger store on the Country Club Plaza in this city by the use of self-service refrigerated cases for frozen foods, dairy products, and related items.

Open-type cases arranged in rows to departmentalize the displays are the only equipment used to show items for sale. Dairy goods and eggs are kept in four large cases placed against the left wall of the department and table-ready meats are in smaller cases with deep storage cabinets at the rear of the section. The right wall of the department is formed by a row of four refrigerated units designed for frozen foods.

In these units the reach-in display space is divided into stalls for cakes, rolls, ice cream, and packaged foods. Displays are reflected in a magnifying mirror placed on the level of vision of customers in the shopping lane. A panel of colorful pictures of foods ready for serving has been placed between the display section

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The dairy products cases have a display unit deep enough for an attractive arrangement of double rows of milk cartons. Non-refrigerated space above the cases provides two shelves for small glasses and jars.

The center unit of the dairy section is devoted to an attractive display of wrapped and packaged cheeses of various types. Bulk cheese is sold in individually priced cuts wrapped in sealed cellophane paper. Fresh supplies are prepared in a back-stage cheese cooler room, 8 by 10 ft., equipped with work tables, rolls of paper, piano-wire cutters, and hot-iron sealers.

Milk, cottage cheese, and cream are sold only in paper containers and no bottled dairy goods are handled. No items are placed on the wooden ledge above the dairy section nor on top of the frozen food unit.

The only decorative touches other than that supplied by the arrangement of displays are the black border trimming on the white display cases and the murals on the store's white ceramic walls.



To \$70,000 Building; Plans To Add Showcases

ALBANY, N. Y.—The Perrone Equipment Co., Inc., refrigeration manufacturer and distributor here, has purchased property at 904 Broadway and will move to that location about Feb. 15, reports Edward Perrone, president of the company.

The purchase price for the twostory structure with 42,000 sq. ft. of floor space was reported as \$70,000. The new location will give the Perrone firm, founded two years ago at 48 Hudson Ave., space for expansion of its retail business.

Since its establishment, the firm has been engaged in the manufacture of bars, counters, and commercial refrigerators. In the new location it will expand activities to include manufacture of showcases.

Perrone said the first floor of the property will be modernized for display space and that the enlarged shop will occupy the second floor.

Officers of the company are: Mr. Perrone, president; Santo Flavia, vice president; Mrs. Ethel Perrone, secretary; and Charles H. Donohoe, general manager.

Utt Refrigeration Gets Charter

BLUEFIELD, W. Va.—The Secretary of State has issued a charter to Utt Refrigeration Co. here, which listed authorized capital stock at \$25,000. The incorporators were L. C. Utt, F. G. Utt, and Jessie W. Utt, all of Bluefield.

Maurice Reid Heads G-E's Bridgeport Works

BRIDGEPORT, Conn.—Maurice W. Reid has been appointed manager of the General Electric Co.'s Bridgeport Works, succeeding Carl M. Lynge, who will devote full time to his responsibilities as manager of manufacturing of the G-E Appliance & Merchandise Department.

Reid, who was appointed assistant general works manager of the plant here in 1946, joined G-E in 1921.

Subsequently, after a four-year absence from the company, he handled special tool and diemaking assignments at the Lynn Works. He was then named general foreman of die casting; and in 1936 he was transferred to Bridgeport as assistant superintendent of the general tool and machine section.

Standard Tube Co. Appoints Stanley L. Willis President

DETROIT — The Standard Tube Co., manufacturer of electric welded steel tubing, announces the appointment of Stanley L. Willis as president and general manager, succeeding T. F. Thornton, retired.

Willis, formerly vice president and general manager is a graduate of Yale university, class of 1917. After a long experience in the welded tubing industry, he joined the Standard Tube organization as vice president in 1943.

Standard Tube Co. recently completed the construction of a new plant at 24400 Plymouth Rd., Detroit.



MOTORS

New Reliance, Wagner, Fairbanks-Morse electric motors in stock for immediate delivery, normal and high torque, 1 to 75 H.P., 208 to 220/440 volt, 3 phase, 60 cycle, in original crates, maximum discounts from manufacturer's list, most of motors for refrigeration compressors. CONDITIONED AIR, INC., Dept. "W," P.O. 2429, Charleston, W. Va.









For All Your
Refrigeration and
Air Conditioning
Requirements

Curtis Refrigerating Machine Division of Curtis Manufacturing Company R-528 1912 Kienlen Ave. St. Louis 20, Mo.

Established 1854



Atlanta Jacksonville Tampa Miami Charlotte

"The South's Largest Refrigeration Supply Jobber"

The "NAT"

Suspended

GAS UNIT

HEATERS

85,000-125,000 and 165,000

BTU Capacity

Available for Natural, Butane

or Propane Gases.

Delivery within 3 or 4 days.

Some exclusive territories

still available.

2710 McGee Trafficway

Air Conditioning Planned For 4 Rebuilt Liners

SYRACUSE, N. Y.—Carrier Corp. has been given the contract for air conditioning, cargo and ships stores refrigeration for the four new "Four Ace" liners now being rebuilt for passenger service to Mediterranean and Red Sea ports by the American Export Lines, Inc., New York. Rebuilding is being done at Bethlehem Steel Co.'s shipyards in New York Harbor, at a cost of approximately \$14,000,000.

Built during the war by Bethlehem to a special American Export design, the four ships were immediately requisitioned by the U. S. Navy and operated as the U.S.S. Dutchess, Dauphin, Shelby, and Queens.

Stateroom space for 125 one-class passengers will be air conditioned by Carrier, as well as public rooms, dining saloons, smoking room, and bar. The crew's quarters will also be completely air conditioned.

Six Carrier 7G8 compressors per ship are being installed to provide air conditioning and refrigeration for cargo compartments and ships stores. The ships stores compartments contain approximately 12,000 cu. ft., with temperatures ranging from 0° F. to 45° F.

Each ship has three cargo compartments, ranging in temperature from 0 to 55° F., depending upon contents. Control of both the air conditioning and refrigeration is fully automatic, and all Carrier equipment is duplicate and interchangeable.

Reconstruction of the four liners will be completed in time to place them in service next summer.

Union Made

Kansas City 8, Mo.

CORPORATION

The One of a series from IST To AIR CONDITIONING by James J. LaSalvia

Fans (Cont.)

TYPES OF FAN WHEELS FOR BLOWER TYPE FANS

There are two types of fan wheels used for blower type fans:

Forward curve blade type.
 Backward curve blade type.

This means that the wheel inside the fan is constructed with curved blades around the periphery of the wheel. On the one type of wheel the blades curve in one direction while on the other type of wheel the blades curve in the opposite direction. The purpose of these blades is to scoop the air at the inlet of the fan and deliver it to the discharge side of the fan. (See Fig. 7.)

These fans are known in industry

1. Forward curve blade fans.

2. Backward curve blade fans.
The forward curve blade fan has
the cup of the curve picking the air

in its forward position as it rotates.

The backward curve blade fan has the back of the cup of the curve in

contact with the air as it rotates.

In comparison, the forward blade fan would naturally pick up more air if the two types were running at the same speed, but at the same time would create more noise.

The backward curve blade fan operates at practically twice the speed of the forward curve type to discharge the same amount of air with slightly less noise.

If both of these fans are properly balanced as to motor size to meet proper resistance for the correct amount of air which is to be handled, then either type can be used.

But if an error has been made and the selection has been made on too small a resistance pressure, which also means that the motor selected is also too small, it is better to use the backward type fan.

Because of its design, the backward blade will balance out with the motor, but the air supplied will be smaller than required. The chances of the motor burning out will be negligible.

With a forward blade type fan the motor will run hot or may burn out, if not caught in time. The proper thing to do in such cases is to remove the motor and install a larger size. Or if the motor cannot be removed, reduce the speed of the fan to the point where the motor will not run hot. Of course this will mean less air and may or may not affect the operation of the system.

For office buildings, restaurants, and similar establishments use the speeds in Table 1 as maximum. For theaters and auditoriums, reduce the speeds 20%. For churches reduce them 30%. For industrial buildings where noise is not a serious consideration speeds may be increased accordingly.

In general the larger the fan used, the more quietly it will operate.

The outlet velocity of the fan does not necessarily determine the velocity of the air in the main duct system. The duct velocity at discharge side of fan is usually the same or lower.

It is impossible to lay down any definite and fast rule which will apply to all establishments. The biggest factors are the distance of the fan location to the room and the degree of quietness required.

For a guarantee of the noise level, consult with the fan manufacturer representative whose equipment you intend to use.

ORDERING FAN

When ordering a fan from any fan manufacturer, the following information is required.

- a. Capacity of fan in c.f.m.
- b. Forward or backward type.c. Resistance of system in inches
- of water gauge.
 d. Single inlet single width or
- d. Single inlet single width double inlet double width.
 - e. Speed of fan in r.p.m.f. Tip speed of fan in f.p.m.
 - g. Speed of motor in r.p.m.
 - h. Brake horsepower of motor.i. Outlet velocity of fan in f.p.m.
 - j. Rotation of fan.k. Direction of discharge of fan.
- k. Direction of discharge ofl. Fan arrangement.

ORDERING DRIVE FOR FAN AND MOTOR

When ordering a drive, the following information is required:

- a. Diameter of fan shaft.
- b. Diameter of motor shaft.c. Distance between fan shaft and motor shaft.
 - d. Horsepower of motor.
 - e. Speed of motor in r.p.m. f. Speed of fan in r.p.m.

The drive will consist of V-belts—one or more belts depending upon the above information. Proper sheaves will also be furnished with the belts to accommodate the belts and will be of proper size to fit the fan and motor shafts.

Motors are manufactured in fractional horsepowers up to 1 hp. Above 1 hp. they are made in the following sizes: $1\frac{1}{2}$, 2, 3, 5, $7\frac{1}{2}$, 10, 15, 20, 25, 30, 40, 50, 60, 75, 100, and above.

Motors are made either for direct current or alternating current, and in various voltages such as 110, 220, 440, and higher. Motors are also noted in various phases for the alternating type, such as single phase, two phase, or three phase, and also various cycles, 25, 50, and 60, of

Table 1—Maximum Outlet Velocities and Tip Speeds For Fans

		Forward B	ackward
		Curve	Curve
Resistance Pressure		Blade	Blade
		Fans	Fans
In. of	Outlet Vel.	Tip Speed	Tip
Water	Ft./Min.	Ft./Min.	Speed
1/4	1,000	1,500	3,400
3/8	1,100	1,750	3,850
1/2	1,200	2,000	4,200
5/8	1,350	2,250	4,800
3/4	1,500	2,500	5,300
7/8	1,650	2,750	5,800
1	1,800	3,000	6,200
11/4	2,000	3,250	6,800
11/2	2,200	3,500	7,500
134	2,400	3,750	8,200
2	2,600	4,000	9,000

which 60 is the most common.

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A motor for a fan should be selected so that the nominal horsepower as shown above is at least 20% above the brake horsepower requirement of the fan.

A typical way of ordering a motor is as follows:

The motor should be 10 hp., 220 volt, 3 phase 60 cycle alternating current, perfectly balanced and designed for continuous operation at full load and rated speeds, induction motor, without indication of overload or a temperature rise in any part of more than 40° C. above room temperature. With motor include slide rail base and adjusting screws to adjust location of motor.

Motor starters should be installed as near the motor as possible.

In ordering motor starters they should have the same current characteristics as the motor. The horse-power should be the same as the motor.

(To Be Continued)

Types of Fan Wheels for Blower Type Fans

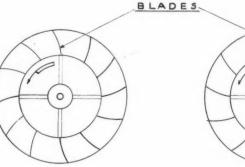


DIAGRAM OF WHEEL

FORWARD CURVE BLADE FAN

DIAGRAM CFWHEEL

BACKWARD CURVE BLADE FAN

Fig. 7—Curvature of the fan blades is illustrated here for both the forward curve blade fan and the backward curve blade fan.

PRECISION · PERFORMANCE · PERMANENCE

Refrigeration products bearing the Larkin insignia may be depended upon to function flawlessly. Originator of the patented Cross Fin Coil, Larkin also instills the same exacting quality in Humi-Temp Forced Convection Units — Bare Tube and Zinc Fused Steel Plate Coils — Instantaneous Water Coolers — Air Conditioning Units — Evaporative Condensers — and other mechanical facilities for efficient commercial and industrial refrigeration.



519 MEMORIAL DRIVE • S • E • ATLANTA • GEORGIA

Notice

CONCERNING NEW YORK AND CLEVELAND SHOWS

Remington is <u>not</u> exhibiting at either show. But we will have our Model 10 ALL-YEAR Room Air Conditioner on private display in both cities.

CLEVELAND: To see Model 10 contact Wayne Clemens or Herb Laube, Hotel Olmstead, Telephone MAin 9660.

NEW YORK: Call us at the Commodore, see our "ad" in the January 26 issue, or better yet, ask now for full information.

REMINGTON
Air Conditioning
DIVISION
Cortland, New York



MULTI-COLD

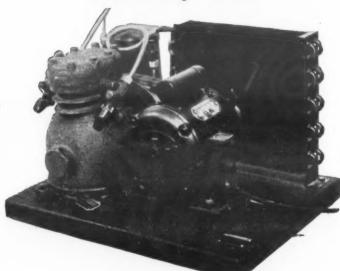
We also manufacture a combination heating and

cooling unit, gas fired furnace and the NAT "Self-Contained" Air conditioning unit.

Most Modern-Most Efficient

Most Economical To Use

Condensing Units



COMPACT AND EFFICIENT

Now furnished in $\frac{1}{6}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, and $\frac{3}{4}$ H.P. Sizes

Write for circular and Information

MULTIPLEX MFG. CO. BERWICK, PA.

Refrigeration Problems

And Their Solution

By P. B. Reed .

For Service and Installation Engineers



Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Copper Plating (2)

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REPAIR SHOP'S EXPERIENCE

An experienced and very able contractor who operates a well-equipped repair shop recently stated that for methyl chloride and "Freon-12" units he uses nothing but a water white oil of 325 viscosity. It costs a few cents more per unit but he finds that it is well worth it.

He finds that it has eliminated copper plating for him and has proved very satisfactory in other respects.

It also seems to him that it has far less tendency to react with moisture, refrigerant or other substances in the system to form sludges, than do the less highly refined, more corrosive oils.

WHITE OIL USED 20 YEARS

Some producers of oils maintain that the lubricating quality of an oil is, to some degree, related to the unsaturated hydrocarbons and some of the straw, amber, and other colored oils are superior in lubricating value to a highly refined white

Perhaps this is true; but the successful use of white oil for about 20 years, in thousands of systems, household, commercial, and air conditioning has amply demonstrated the ability of a white oil of proper specifications to lubricate satisfactorily.

It has also been said that a white oil, at least some white oils, breaks down after a time and at high temperatures, and becomes quite corro-

peratures, and becomes quite corrosive. This may be true under laboratory conditions, but it is not borne out by field experience; for thousands of compressors now have in them the same white oil that was put in 10 years or more ago, with no trouble from this source, nor evidence of its existence.

It has been said that white oil tends to dewax at comparatively high temperatures and is, therefore, unsuitable for low temperature systems. To the author's positive knowledge, white oil with the above specifications, except a lower pour point—minus 25° F., has been very successfully used in all three stages of a three stage unit with the evaporator below minus 100° F.

CARBON TET. PROMOTES COPPER PLATING

Carbon tetrachloride is widely used to wash compressor parts and flush out coils, condensers, or receivers, for it is a very effective solvent for oils and greases and their mixtures with dirt, scale, and other foreign matter. It is particularly useful because it is non-flammable and is, in fact, the liquid used in many fire extinguishers.

However, it does leave a reddish, powdery deposit, and it has been definitely established that this deposit very greatly aggravates and promotes copper plating.

A better solvent to use, although it is inflammable and must be treated with caution, is a mixture of % naptha and ¼ kerosene. The kerosene reduces, to some extent, the inflammability of the mixture. Other solvents are also available with low flammibility.

FOLLOW COMPRESSOR MANUFACTURER'S ADVICE

The manufacturer who designed and built the compressor probably knows more about what oil should be used in it than anyone else. He undoubtedly chose the oil he uses and recommends, after extensive (and expensive) laboratory tests and field experience. He has some very sound reasons for his choice of oils; possibly it is a special type, not generally offered on the market.

Moreover, if the compressor fails, the manufacturer of the compressor is the one whose reputation is damaged, not that of someone who has recommended some other oil than the manufacturer's oil. In his own defense, the compressor manufacturer is not likely to use nor recommend an inferior oil, nor one that is unsuitable.

He is not interested in selling oil; he is interested only in seeing that the proper oil is used.

Service engineers will do well to use in a compressor the oil that is furnished or specified by the manufacturer of the compressor.

If, however, the manufacturer's oil is not obtainable when needed, or his recommendations cannot be determined, then the above information on the relationship between copper plating and oil may be considered, especially if difficulty is being experienced with copper plating.

in Half

134 Lafayette St.

New York 13, N. Y.

GET Our Quick SERVICE

on Parts and Supplies

for REFRIGERATION

and Air Conditioning

The HARRY ALTER CO., Inc.

Jacobs School Will Deal Exclusively with Washers

DETROIT — The first training school in the country devoted exclusively to the problems of selling and servicing automatic washing machines will be established in Detroit, according to an announcement by Rex C. Jacobs, president of F. L. Jacobs Co., manufacturer of Launderall

Jacobs told a meeting of 200 Launderall distributors and their representatives here that the company has set aside \$50,000 for the purpose of opening up this totally new field of household appliances so that sales people as well as their customers will have a complete knowledge of just what a fully automatic laundry can do for the modern housewife.

"Automatic laundering is more than just another major appliance," Jacobs said. "It is a whole new theory of attacking a very old problem—the family wash."

Jacobs announced that Glenn G. Hyder of the Launderall organization will head the training school.

Technical College Test Indicates Value Of Driers In 'Stuck-Up' Compressors

CHICAGO — Do driers relieve "stuck-up" refrigeration compressors?

The Henry Valve Co. here recently obtained from a local educational institution data indicating that they

Franklin P. Mason, chairman of the refrigeration department at Chicago Technical College, reported to the valve manufacturer that after installing a Henry drier on a "stuck-up" Dayton 1933, ¼ hp., single cylinder condensing unit, the unit operated for three months with no further evidence of trouble.

He added that subsequently installed driers on other SO₂ systems had proved equally effective.

Mason explained that the school had obtained the Dayton compressor from a student who complained that it had been "sticking" for the preceding four months. The machine was cleaned and freed several times, but the "sticking" persisted, Mason said.

Then Victor Shostrum, an instructor, decided to try a drier to collect moisture in the system. A $\frac{1}{2}$ hp. capacity Henry drier was installed in the suction line close to the compressor as recommended by the manufacturer.

The unit became very warm for the first few hours running, but after that it operated at normal gas temperature, Mason related.

After the unit had operated satisfactorily for three days, the drier

was removed from the system, sealed, and forwarded to the Davison Chemical Co. for analysis to determine moisture content.

Davison's analysis of the contents showed: silica 67.56%, moisture 17.07%, carbon 10.95%, sulphur dioxide 4.16%, and lost in analysis .26%.

This indicated, it was said, that approximately 12% free moisture was adsorbed by the silica gel and that the gel was loaded with sludge, which accounts for the high carbon content.

At the time the drier was removed, Mason continued, a sample of the SO_2 was withdrawn and sent to the Ansul Chemical Co. for analysis to determine the amount of moisture which remained in the system.

Ansul reported that the quantity of SO_2 was insufficient for a complete analysis, but their examination failed to show the presence of sufficient moisture to cause any trouble.

New York Store Plans to Air Condition Building In Spring

BINGHAMTON, N. Y.—The fourstory store building at 47 Court St. here will be air conditioned next spring when it will be taken over by Richlin Stores, Inc. of New York City, which is planning an extensive improvement program, it has been reported.



Mueller Brass Co. refrigeration fittings conform in every respect to S. A. E. standards with the exception of the bore. THE BORE IS MACHINED TO PERMIT A FULL FLOW EQUAL TO THE INSIDE DIAMETER OF THE TUBING USED, AND CONSEQUENTLY IS LARGER IN INTERNAL AREA THAN S. A. E. FITTINGS.

All fittings are accurately machined and of the

highest quality materials. All flare outlets are finished to the closest desirable tolerances.

Particular attention is given to the accurate machining of flared seats; they must be absolutely flat, smooth and concentric with the bore. All male flare threads are protected by heavy sleeves to prevent damage in shipping or handling.

HASCO

... now makes suction and discharge valve reeds for leading makes of Hermetic units. Look to Hasco for the best in both confort the best in both conventional and hermetic type compressor parts.

WRITE FOR ILLUSTRATED CATALOGUE AND PRICE LIST G R E E N S B O R O , N. C.

1728 S. Michigan Ave.

Chicago 16, III.

Years of experience have conclusively shown that forged brass nuts and fittings are vitally essential in mechanical refrigeration and air conditioning because they require a dense metal structure that can best be obtained through forging.

STREAMLINE
PIPE AND FITTINGS DIVISION
MUELLER BRASS CO.
PORT HURON, MICHIGAN



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by distributing

Write TODAY for catalog showing the complete

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SUPREME METAL FABRICATORS, Inc. - BROOKLYN 11, N. Y. -

THE NEW MULTIPLEX BAR DISPENSER

Revolutionizing Tavern and Bar Service

- IT ELIMINATES BOTTLES
- IT MANUFACTURES FRESH CARBONATED DRINKS (Seltzer, Cola, Lemon, Ginger Ale) AS EASY AS DRAWING A GLASS OF BEER
- IT SPEEDS SERVICE 100% AND INCREASES THE PROFITS OF BARS and TAVERNS TREMENDOUSLY.

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MULTIPLEX FAUCET COMPANY

MANUFACTURERS OF SOFT DRINK DISPENSERS

4319-25 Duncan Ave. (Division 12) St. Louis, Mo.

Multiplex:-The Original Mixing Faucet, model of simplicity and durability for over 40 years.



What Was New at the Winter Marts

By John O. Sweet

CHICAGO - Notes on what was shown and announced during the winter markets at the American Furniture Mart and the Merchandise Mart (supplementing the report in the Jan. 12 issue of the NEWS):

GENERAL ELECTRIC: Table-top electric water heaters have heretofore been available only in 30-gal. capacity and with a single unit. Now, production is scheduled to get under way in April on a 40-gal., counterheight heater with either single or twin unit.

This heater, a sample of which G-E brought to the market, will have the same exterior dimensions as the 30gal. version without any sacrifice of insulation, according to E. J. McFadden, sales manager of the water heater division, appliance and merchandise department.

'The additional capacity is obtained by taking the tank clear to the floor and putting connections at the front-bottom," McFadden pointed out.

Indicative of the increasing rate at which water heaters are now being turned out, McFadden said, is the fact that G-E shipped 30% as many heaters during December as it did during all of 1946. He added that the firm took water heaters off allocation Jan. 1.

The first shipment of water heaters from G-E's new factory in Milwaukee was sent out Jan. 3, McFadden reported.

New water heater prices were announced as follows:

Model	Unit	New Price	Old Price
EG15-1	Single	\$ 89.75	\$ 94.75
EG30-7	Table Top	119.75	124.75
EG30-1	Single	112.75	114.75
EG30-2	Twin	119.75	124.75
EG40-2	Twin	129.75	134.75
EG52-1	Single	132.75	139.75
EG52-2	Twin	139.75	149.75
EG66-1	Single	152.75	154.75
EG66-2	Twin	159.75	164.75
EG82-1	Single	172.75	179.75
EG-82-2	Twin	179.75	189.75
(The	above heaters	are	equipped

with galvanized copper bearing steel tanks.)

EM30-2	Twin	189.75	199.75	
EM40-2	Twin	219.75	229.75	
EM50-2	Twin	279.75	299.75	
EM80-2	Twin	359.75	379.75	

(The above heaters are equipped with Monel metal tanks.)

Changes in G-E bubbler-type water cooler prices were effected as follows, it was reported:

Model	New Price	Old Price
RW-45A1	\$162.30	\$168.07
RS-45A16	147.30	153.07
RW-65A1	180.89	188.16
29-65 A 16	165 80	173 16

AMANA SOCIETY: Amana's new Model 200-S freezer-cooler, which the Society set up in its space, is an outgrowth of the former Model 200. Features of the new model were announced as including stainless steel interior and exterior, freezer door on the outside (it was inside on the 200). interchangeable panels, and adjustable stainless steel shelving.

Model 200-S has 24 cu. ft. of freezer space and 100 cu. ft. of cooler space. It is operated by two hermetic units, one of ½ hp. and the other of

Two other new stainless steel freezers were brought to the market, a 24-cu. ft. model and a 30-cu. ft. model, the latter for remote installa-

SANITARY: The 10%-cu. ft. Trizone combination refrigerator and freezer, described as Sanitary's best seller prior to the war, is just now getting into production, a representative reported.

Retailing for \$399.50, the Trizone measures $48\frac{1}{2}$ by $28\frac{1}{2}$ by $40\frac{3}{4}$ in. It contains a normal-temperature section of 41/2 cu. ft. and fast freezing and frozen storage compartments

EXPERIENCED MEN CAN SERVE YOU BEST



WEST COAST SUPPLY JOBBERS SINCE 1928

REFRIGERATION SERVICE INC 3109 BEVERLY BLVD LOS ANGELES 4 CALIF

One of the Models In the 1948 Norge Line



Norge refrigerator model \$-848, one of the new 1948 models shown at the Winter Marts in side space, evaporator, special shelf arrangement, new white breaker strip, and special control arrangement.

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totaling 61/4 cu. ft. It is powered by a single unit.

Another model exhibited was an upright version of Sanitary's chest-"Quicfrez" farm locker plant (Model 1248). This model, which is for remote installation, had been produced on a special-order basis but the firm now intends to build a few each month as a part of its regular production schedule, according to the representative.

CROSLEY: Almost an entire side of the Crosley space was devoted to a display accenting the fact that the firm manufactures "a new Shelvador refrigerator every 27 seconds."

The display consisted of a mock ® factory exterior and an imitation As the hand of the clock ticked off the seconds, 20 colored photographs in the "roof" of the "factory" lighted up one after the other to illustrate various stages in the production of refrigerators.

Handy Little Fellow



New model of the Norge "Water Boy" desk water cooler was on display at

BEN-HUR: In this firm's showroom was the latest addition to its farm and home freezer line, an 18cu. ft. model. This freezer, known as Model 2187, has a separate freezing compartment of 3.7 cu. ft. and a frozen storage compartment of 14.3 cu. ft. It is 36 in. high and $28\frac{1}{2}$ in. wide, the same as Ben-Hur's 6, 9, and 12.5-cu. ft. models, and 82 in, long. It holds about 900 pounds of frozen

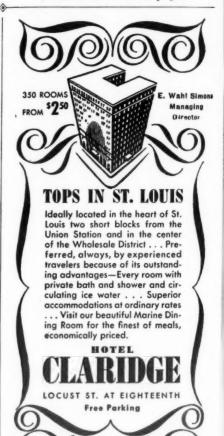
Features listed for this and the

models include counter-balanced covers, cabinets, hardware, extra-thick in-"safety" sulation, choice of inner liners, temperature indicators, cold controls, and hermetically-sealed compressors.

EASY: Four major points were made by an executive of Easy regarding the concern's 1948 Spindrier with automatic spin-rinse. He claimed the new two-tub washer:

1. Spins off suds, super-rinses, and damp-dries clothes when the operator turns the water tap and pushes a 2. Gives clothes a two-way rinsing action with a powerful needle

(Concluded on next page)



Let's Go...NATION WIDE. **ALERT DISTRIBUTORS AND DEALERS**

WILL BE FRANCHISED * BUYERS EVERYWHERE -FOR BUXTON'S THREE GREAT NEW REFRIGERATORS *

NEW STREAMLINING * NEW ENGINEERING FEATURES SO COMPACTLY DESIGNED THAT THE SPACE REQUIRED IS ABOUT THAT OF THE AVERAGE 12 Cubic Foot Refrigerator, but you actually get a Refrigerator with 22 Cu. Ft.

normal temperature . . . the Combination Refrigerator is 19 Cu. Ft., half Zero-and half normal and the all Zero refrigerator is 18 Cu. ft.
—And the BUXTONAIRE DRY Cooler for bottled beverages and food products.



All Inquiries will be personally contacted within a few days.

Manufactured by

BUXTON, INC. 1960 E. 48th St. Phone LUcas 8158 Los Angeles (11) Calif.

> General Sales Manager, E. George Sanders 3120 N. Main St., Dayton 5, Ohio

'Big Names' In Major Store Appliance Affairs



Top-flight department store appliance executives stop in at the Bendix Home Appliances room at the Chicago Furniture Market for a coat pressing job on a new Bendix automatic ironer. Left to right: Jim Ogden, J. L. Hudson Co., Detroit; Chick Young, market representative of the Associated Merchandising Corp. major appliance division, New York City; Glenn Ferrell, Joseph L. Horne Co., Pittsburgh; Ed Collier, Stix-Baer-Fuller Dry Goods Co., St. Louis; W. A. Becker, regional manager for Bendix; and Ed Foster, F. & R. Lazarus Co., Columbus, Ohio. Ogden, Young, Ferrell, and Foster constitute the major appliance committee of AMC stores.

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(Concluded from preceding page) spray in a spinning basket. 3. Saves hot, sudsy water by returning it to the tub for use on a second load. 4. Uses but two to three gallons of hot rinse water for a full eight-round load.

DEEPFREEZE: Along with four other models, Deepfreeze exhibited its two newest freezers, a 16-cu. ft. farm unit (B16) and a 4.8-cu. ft. utility freezer (B5) for the small family or for use as a storage cabinet to supplement a larger freezer.

More than 560 pounds of assorted foods are said to be held in the five compartments formed in the farm freezer by four plate-type coils. Features are listed as including "Medial Octo-Plane" freezing, a specially-developed plastic insulation made of foamed formaldehyde-resin, "Cushion Seal" lids, patented combination hinges, and a 9-in. high compartment located over the operating mechanism where empty food cartons, liners, and wrappings may be stored.

The B5 will hold more than 168 pounds of assorted foods, it is claimed. Temperature control, counter-balanced lid, "kicker" toe space, and metal dividers are among features.

ESTATE: The following prices were given out at the Estate space for the electric and gas range lines now in production.

Electric ranges: Monticello, \$329.95; Seville, \$289.95; Avalon, \$259.95; and Shelburne, \$219.95. Gas ranges: Radcliffe, \$239.95; Virginia, \$279.95; Sweetbriar, \$214.95; Vassar, \$194.95; and Wellesley, \$174.95.

An Estate representative reported that the division is no longer in the home freezer business.

GIBSON: Gibson's latest upright home freezer, in which the former glass interior doors have been eliminated, has four freezing compartments. Two are 6½ in. high, one is 12½6 in. high, and the fourth is 11½6 in. high. All are 22½ in. wide and 14 in. deep.

Called No. HF-618, the freezer has a net capacity of 6.59 cu. ft. and a shelf area of 8.60 sq. ft. There are three "Freez'r Shelves" with an extra freezing plate for intensified freezing, according to Gibson.

AMERICAN CENTRAL: The Avco division announced during the markets that a 5% increase in the price of its base cabinets puts the following models at these retail levels: LB 15, \$43; LB 18, \$46; LB 21, \$51; LB 24, \$55; and LB 30, \$62.

ABC: Current prices of ABC washers were given out as follows at the Altorfer Bros. Co. showroom: 251-S, \$129.95; 400, \$149.95; Spinner, \$189.95; and ABC-O-Matic, \$249.95. The ABC deluxe ironer retails for \$189.95. All are Zone 1 prices.

coleman: The new Coleman LP-gas water heaters being produced in 20, 30, and 45-gal. sizes and equipped with the new Grayson Type A automatic Unitrol control are retailing for \$109.95, \$124.95, and \$139.95, respectively, it was announced.

Coleman was also displaying a hand-made console model oil-burning space heater which is due to be ready the latter part of March. The firm hopes to have natural gas water heaters available about April 15.

BARLOW & SEELIG: Top model in the Speed Queen washer line (super deluxe model 948) is now equipped with a stainless steel tub, a company official pointed out. This model retails for \$129.95 in Zone 1.

Altogether, the firm is now manufacturing four washer models and two ironers. The washer prices range from \$99.95 to \$129.95, the console ironer retails for \$154.95, and the portable "Ironette" is priced at \$64.95 (all Zone 1 prices).

Speed Queen appliances are still being shipped on an allocation basis and its is expected that this system will be continued for at least six months, an official of the firm said.

OTHERS: The refrigerator division of Federal Furniture Factories introduced a new series of ice refrigerators with full-length doors and styling similar to that of electric models. . . Detroit Vapor Stove Division of Borg-Warner showed new White Star gas ranges. . . A full-sized, manually-operated, tanktype vacuum cleaner, described as "ideal for use in non-electric areas," was displayed by Hamilton Ross Industries (retail price, \$14.95).



Edison Institute Sales Conference April 6-8

NEW YORK CITY—The 14th annual sales conference of the Edison Electric Institute will be held at the Edgewater Beach Hotel, Chicago, on April 6-8, Ralph P. Wagner, Chairman of the EEI Commercial Division General Committee, has announced.

The Residential, Rural Commercial and Industrial sections of the Commercial Division will open the conference with four separate meetings on Tuesday, April 6, for intensive discussion of sales problems in these specific fields.

The conference General Sessions will be held on Wednesday, April 7, and in the morning of April 8. The conference will conclude with a luncheon session on April 8.

Kelnard Names Begley To New Sales Post

LONG ISLAND CITY, N. Y.—John Begley, formerly head of the parts department of Kelnard Sales &

Service, Inc. here, has been promoted to wholesale representative, George T. Sutphin, vice president in charge of sales and service, has announced.

ice, has announced.

In his new position, Begley will sell commercial refrigeration, parts, and supplies to dealers. Sutphin

John Begley dealers, Sutphin explained. Begley had been head of the Kelnard parts department.

NEWA Resolution Blasts Record Ban

NEW YORK CITY—"Vehement disapproval" of the ban on the making of phonograph records by union musicians ordered by James C. Petrillo, president of the American Federation of Musicians, was voiced in a resolution recently adopted by the National Electrical Wholesalers Association.

The resolution pointed out the "serious injury" to manufacturers, wholesalers, and retailers of phonograph records, phonographs, and radio-phonograph combinations as well as the general public is threatened by this "fiat of a private individual."

Petrillo's action was labeled as "an arbitrary and wholly unjustifiable attack on the American standard of life and the freedom of the American people to live their democratic lives subject only to laws passed by their freely chosen lawmakers and not to the fiat of the private individual."

Coffee and Doughnuts Help Store's Opening

COLERAINE, Minn.—The Bovey Mercantile Appliance Store has been opened at Coleraine, with a full line of electrical appliances.

On opening day all comers were asked to register, and 1,080 cups of coffee and doughnuts were served. An invitation has been sent to all non-profit organizations of the area to use the store's kitchen facilities.

Proctor Sales Chief Sees Shortages Again In Certain Lines

PHILADELPHIA—Automatic popup toasters won't be in sufficient supply until 1949, and the Proctor Electric Co. plans to continue allocating its output for at least the first quarter of this year, according to R. M. Oliver, the company's vice president in charge of sales.

"We are expanding our sales force and increasing our advertising expenditures—but both Proctor irons and toasters will be on allocation during the first quarter of 1948," Oliver said.

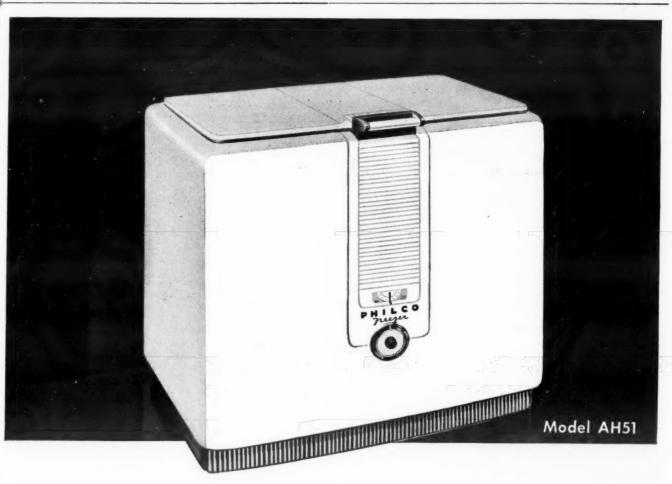
"Steel is likely to be very tight next year and is apt to continue a limiting factor. This may be particularly true of enameling steel, which would greatly curtail roaster production," he continued.

"Currently toasters are much tighter than irons ever were when first released for postwar production. The combination of short supply and peak demand means that toasters won't be sufficiently plentiful until 1949, in my opinion."

Proctor plans no expansion of plant production facilities next year, Oliver asserted.

"Since the war we have built our iron and toaster lines just about as far as we intend to. However, it is quite possible that as we get into the production of new items later on we will expand our plant capacity as the need arises."

Proctor plans to market test a new electric blanket in the near future, Oliver revealed.



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YOU SELL PROMOTES THE FROZEN FOOD HABIT!

Yes! You profit from quantity sales of packaged frozen foods and from increased demand for processing service—as well as from the freezers themselves. It's a 3-way plus profit opportunity—and Philco is the ideal freezer to help you develop it.

With a handy 2½ or 5 cu. ft. Philco home freezer . . . your customers will keep the bulk of their "frozen assets" stored in *your* locker plant . . . will also have the *on hand* supplies they need for the table. Add this new service for your locker patrons this year. For additional information about this 1948 plus profit opportunity write today to Philco Corporation, Philadelphia 34, Pa.

PHILCO FREEZERS

FEATURES THAT SELL THEMSELVES

- Temperatures as low as 15° below zero.
- Outside thermometer that registers inside temperature.
- Locking temperature control.
- Automatic Guardian Bell rings if current fails.
 Automatically resets itself.
- Hermetically sealed power unit.

Heat Pump Needs Higher Coefficient of Performance; Is Not a Reverse Cycle System, Prof. Penrod Declares

DETROIT - "It is misleading to call the heat pump a reverse cycle refrigeration system, because it is not," Prof. E. B. Penrod maintained in a talk before the Detroit section of the American Society of Refrigerating Engineers recently.

Nothing is reversed. The machine is merely changed from a cooling to a heating type, he declared.

Prof. Penrod is head of the mechanical engineering department at the University of Kentucky and is a nationally known heat pump au-

In his talk, he sketched, through highly technical formulas, the theory and limitations of the heat pump. He asserted that the commercial heat pump is now a reality, but that the domestic is still in the experimental stage.

Much research is yet to be done on extracting heat from the ground and putting it back into the ground, he We need to determine more

Both necessary to

REFRIGERATION MAINTENANCE

THE MOVING DEHYDRANT...CIRCULATES AND SEARCHES OUT MOISTURE, DESTROY- ING IT CHEMICALLY. FOR NEW AND RECONDITIONED UNITS, AS WELL AS OLD.

A HIGHLY EFFECTIVE REFRIGERANT LEAK DETECTOR. ITS STABLE VIVID RED COLOR

REVEALS LEAKS INSTANTLY IN OLD OR

HIGHSIDE CHEMICALS CO.

accurately the time it takes to transfer this heat from the ground to the house, he added.

Prof. Penrod saw little hope of even estimating the cost of a heat pump until mass production is attained. He said that one manufacturer intended to go into mass production on a heat pump within the next five or six months.

The sale of these units, he indicated, will be made on the bases of the climate in the sales area, the availability of cheap electricity, and the income of the people there.

Prof. Penrod condemned the practice of trying to sell the heat pump on the basis of conservation of fuels. He stated that until heat pumps could maintain a coefficient of performance of at least 3.3, they would not conserve any fuel.

He said that below that figure, other heating fuels performed just as efficiently and perhaps more so than the heat pump. He further indicated

THE MOST ADVANCED

UNIT ON THE MARKET

Blower leads the field. Exhaustive tests have

proved the greater mechanical strength . . .

outstanding efficiency of the Lau Series "A"

Blower. Special features include the center-

suspension wheel for truer concentricity and

greater air flow. Smaller over-all size fits more

jobs. From 7" to 30" wheel diameter sizes.

Write Dept. R for complete information.

The PIONEER FLUID DEHYDRANT

REFRIGERANT LEAK DETECTOR

THE LAU BLOWER COMPANY • DAYTON 7, OHIO

WORLD'S LARGEST MANUFACTURER OF FURNACE BLOWERS

coefficient of performance of 4 before it can be sold on the basis of fuel

Performance in present installations is very erratic, due to a variety of conditions not necessarily inherent in the system itself, he explained. For instance, one installation showed a very low coefficient of performance because the condenser had been placed right above the evaporator without any insulation between them. Another showed a high coefficient of performance because the building was extremely well insulated all around.

In discussing coefficients of performance, Prof. Penrod differentiated between the heat pump's coefficient and the coefficient of the heat pump system as a whole. He defined the heat pump system as the heat pump plus its auxiliary equipment, such as fans, pumps, and automatic controls.

Data compiled by the professor himself indicated that the performance of earth to air systems had a much higher coefficient than air to air systems. When operating under the same assumed conditions, he said, they compared as follows:

	Heat pu	mp types
	Earth	Air
Carnot c.o.p.	5.62	3.82
Theoretical c.o.p. for		
cycle considered	5.12	3.37
Actual c.o.p. of		
heat pump	3.91	2.58
Actual c.o.p. of		
heat pump system	3.52	2.24
Compressor capacity	,	
tons	4.36	3.81
Compressor		
motor, hp.	6.52	9.9
Energy supplied to		
the system, kwhr	129.8	203.4
Compression ratio	4.22	9.85

He pointed out that the earth heat pump system has the advantage over the air type by requiring a smaller compressor motor and consuming less energy. It needs only one auxiliary fan while the air heat pump requires two.

Asked from the floor whether refrigeration contractors would be able to handle service on the heat pump, Prof. Penrod pointed out that he has never found a heat pump installation that needed refrigeration service.

In some instances, he said, other parts of the system have become defective, but never anything that had to do with refrigeration.

He opined, however, that servicemen with experience only on domestic refrigeration units should not be allowed to work on heat pump installations. He explained that suction and head pressures were entirely different from the domestic refrigeration unit and the serviceman not aware of this could throw the whole system out of adjustment.

He stated that refrigeration contractors should not try to service heat pumps without trained engineers to do the work.

Another member of the audience asked about the possible economy of using Diesel heat in the heat pump.

Prof. Penrod said that he thought using a diesel engine to drive the refrigeration compressor and then utilizing the heat given off by the engine in the heating system would prove very efficient for large commercial installations.

Four Fill New Posts with Schnacke









To carry out Schnacke, Inc.'s expanded program (left to right), T. G. Thomas has been named refrigeration equipment division sales manager; B. S. Miller, North Central division manager; W. H. Hollingsworth, Northeast division manager; and G. G. Miller, Jr., Southwestern sales engineer,

Thomas Named Refrigeration Sales Chief, Miller, Hollingsworth Promoted by Schnacke

EVANSVILLE Ind. - In the expansion program for 1948 of the sales organization at Schnacke, Inc., condensing unit manufacturer here, it was announced by F. C. Schnacke, president that T. G. (Ted) Thomas has been appointed sales manager of the Refrigeration Equipment Division. He replaces Eddy Miller, who resigned to go into his own business.

Thomas had been with the company previously as division manager and has had considerable experience in refrigeration sales and engineering as head of his own business in Texas.

Other personnel changes announced include Basil Miller, who formerly was a sales engineer, appointed division manager of the North-Central territory. Miller had been with Schnacke about six months and formerly was with Nash-Kelvinator in a

similar post, and most recently a consulting engineer in Cleveland.

William H. Hollingsworth, formerly distributor for Schnacke Refrigeration Equipment in Philadelphia, has been appointed division manager in the Northeast territory. Hollingsworth is a registered professional engineer and a veteran colonel in the United States Marine Corps, where he was in charge of important engineering work, much of it low temperature refrigeration and air conditioning. He will make his headquarters in Philadelphia.

George G. Miller, Jr. has joined the organization as sales engineer in the Southwest territory. He is an engineer and was in his own refrigeration business in Kansas just prior to his new post. He will make his headquarters in the territory.

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Will Double Production, Boost Order Fulfillment

CORPUS CHRISTI, Texas - The Fred Cooper Co., designer of special types of commercial heating and cooling units and stainless steel equipment for cafes and restaurants, has moved to larger quarters at 116 North Staples St. here.

Doubled production and a 30% increase in order fulfillment are anticipated as a result of the move, according to Harry Bamesberger, sales manager.

The company can now design and manufacture forced air heating equipment for any size project, he said. He pointed out that the firm makes it a practice to design its hot air ducts large enough so that they may be converted to air conditioning

Charleston Maytag Co. Chartered To Operate at Wholesale, Retail

CHARLESTON, W. Va. - The Charleston Maytag Co., here, has received a charter from the Secretary of State to operate a wholesale and retail household appliance business. Authorized capital stock is \$50,000,

with \$30,000 paid in.

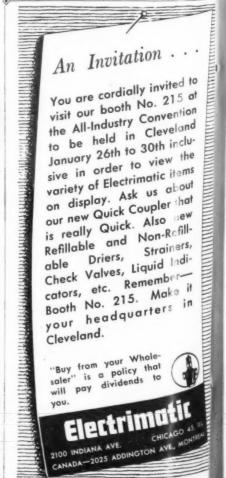
New Fred Cooper Plant Northeastern Distributors Adds 6 to Sales Department

BOSTON - Northeastern Distributors, Inc. here has recently announced the addition of six men to its sales department.

Samuel Schlifer, formerly manager of electrical appliance department, The Continental, Boston; Larry Lewis, of the Lion Distributors sales force, Worcester; Ralph Tupper, commercial manager of station WKBR, Manchester, N. H.; and Bob Morrill, Harriss Calorific Sales Co., Boston, were named sales representa-

W. L. Oldham Incorporates Greensboro Heating Firm

GREENSBORO, N. C. - W. L. Oldham, Inc., of this city, has received a charter from the Secretary of State to sell ventilating fixtures and heating equipment. Authorized capital stock is \$100,000. The incorporators are W. L. Oldham, Walter Allred, and Donna Oldham, all of Greensboro.







let the mails save you valuable working hours! From AIRO you can count on fast service, dependable service . . . directed by men trained to know your business needs.

MAKE YOUR TIME WORTH MORE MONEY! Save working hours for New Business!
 Order parts from our catalog in spare time 2. Save wear and tear on your car

Save gas and oil Get the right part-and ALL the parts 5. Deal with men who know your business

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AIRO SELLS WHOLESALE ONLY

ASRE Presents New Charters & Awards Oil-O-Matic Staff Will



(Photo by Austin Jones, Kerotest Co.)
Two new sections were formally recognized by the American Society of Refrigerating Engineers at its last annual meeting. R. H. Lock (left), chairman of the Toronto section, receives the charter from Vice President Burgess Jennings, and George Iwashita, chairman of the new Evansville section, receives his section's charter in the photo at right.



Awards for the best technical papers given in the preceding year were also handed out at the ASRE meeting by Warren Farr, chairman of the awards committee, to R. H. Swart (photo at left) and Cecil Boling (right). Seated is ASRE President Holske.

Johns Sales Corp. Serves

As Mfrs'. Agent In East

NEWARK, N. J. - Thomas W.

Binder and Harold Binder have or-

ganized the Johns Sales Corp. which

will operate as a manufacturers'

representative in northern New Jer-

Thomas Binder has been associated

with the refrigeration industry for

the past 25 years as a wholesaler and

a manufacturer. Harold Binder's ex-

perience goes back 10 years as a

wholesaler and manufacturer in addi-

tion to three years in the Army

Electrical Firms Urged To

Meet Census Requirements

NEW YORK CITY-W. C. Johnson, president of the National Elec-

trical Manufacturers Association, is

calling upon the entire electrical

manufacturing industry to meet

promptly and accurately all the re-

quirements of the 1947 Census of

Manufactures which is being initiated

all members of the industry to a re-

cent statement prepared and dis-

tributed by the Chamber of Com-

merce of the United States entitled

"YOU and the New Census of Manu-

which have been sent to all members

of NEMA, emphasizes the importance

of the 1947 Census of Manufactures

to business, and points to the bene-

fits which will accrue to all concerned

through prompt and accurate report-

ing on the part of all manufacturers.

it is pointed out, will be the first such

census since the one taken for 1939.

Consequently, all industry will be

awaiting the summarized data which

will provide up-to-date benchmarks

for intelligent business planning.

How soon such benchmarks will be-

come available, and how accurate

they will be, depends entirely upon

industry itself and its response to

The electrical manufacturing in-

dustry, as well as other industries.

Johnson points out, has an important stake in the 1947 Census of Manu-

factures. The cooperation on the

part of all manufacturers will not only provide important up-to-date information at an early date, but will reduce considerably the cost of tak-

Copies of the U.S. Chamber state-

ment may be obtained by writing

directly to the Economic Research

Department, Chamber of Commerce

of the U.S. A., Washington 6, D. C.,

or to the Statistical Department of

the National Electrical Manufacturers

Association, 155 East 44th St., New

this new census inquiry.

ing the census.

York 17, N. Y.

The 1947 Census of Manufactures,

This statement, copies of

Johnson directed the attention of

during January 1948.

factures.

Signal Corps.

sey and the state of New York.

Regional Managers for 3 Areas Named by Airtemp

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DAYTON-Appointment of three new regional managers by the Airtemp Division of the Chrysler Corp. has been announced by H. A. Malcom, vice president and general sales manager.

They are: R. B. Stotz for the Atlanta region, F. J. Laughna for the Detroit region, and R. W. Steinbaugh for the Dayton region.

Stotz was advanced from the post of field engineer. Laughna was transferred from the Dayton region to Detroit, while Steinbaugh, a former district representative in the Dayton region, was moved up to the post vacated by Laughna.

Finish Chart Covers 27 Different Colors

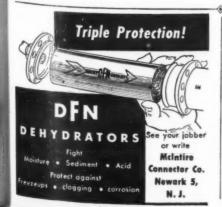
NEWARK, N. J.—So industrial designers, design engineers, stylists, and others whose job it is to pick the right finish for a product can better visualize beforehand how a certain finish will actually look, a new unusually large color deck has been prepared by Maas & Waldstein Co., 438 Riverside Ave., Newark, producer of lacquers, enamels, and synthetics.

This helpful "Finish Selector Guide" known as the Novelty Finishes Color Deck, contains 27 differchips each measuring 3 x 5 in., and shows a variety of lacquers, enamels and synthetics. It is available upon written request.

Jackson County Appliance Dealers Elect First Officers

JACKSON, Mich. — The newly formed Jackson County Radio and Appliance Dealers Association elected its first slate of officers recently. T. J. Foy of Foy's Radio & Appliance Co. was named chairman, Al Weatherwax of Weatherwax Appliances, vice chairman, and Paul Wilkinson of Wilks Appliance Co., secretary.

All officers are from Jackson city. Election of a board of directors was postponed.



Spot-Check Fuel Waste

BLOOMINGTON, Ill.—Using Champaign, Ill., as a proving ground, engineers and all sales personnel, both field and office and including the head of the Williams Oil-O-Matic Division of Eureka Williams Corp., were planning to ring door bells and canvass oil heated homes Friday, Jan. 16, to demonstrate in a typical American community the extent of unnecessary fuel and heat waste and how the fuel shortage problems of the nation could be solved within the home without danger to health from underheating and without rationing or restrictions.

The company's sales and servicemen throughout the country have been called in to help on this test. They will ring door bells, inspect heating plants, check homes for heat leakage, and delve into heating practices, using scientifically developed check charts and instruments.

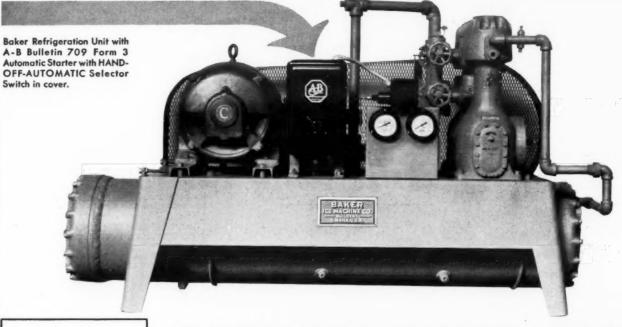
Results will be sent to all parts of the country and Williams Oil-O-Matic will offer through its national service and sales organization free fuel conservation engineering surveys.

Rehard Discusses Code Changes

DETROIT - Proposed changes in Detroit's refrigeration code will be discussed by John C. Rehard, chief safety engineer of the city, at a dinner meeting of the Refrigeration Contractors Association of Detroit to be held Jan. 22 at 6:30 p.m.

The dinner and meeting will be sponsored by Young Supply Co., wholesaler of parts and supplies.





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REFRIGERATION UNITS

equipped with

Trouble-Free Motor Controls

Bulletin 709 solenoid motor starter for automatic refrigeration control White interior reflects light in dark corners. Ample wiring space.

ALLEN-BRADLEY STARTERS ARE TROUBLE FREE. Only one moving part. No pivots, pins, or bearings to corrode or stick . . . no jumpers to break. You install them . . . and forget them!

NO CONTACT MAINTENANCE. Allen-Bradley patented silver alloy contacts never need cleaning, filing, or dressing.

DEPENDABLE OVERLOAD RELAYS. Allen-Bradley thermal relays are accurate and dependable even after long service.

The A-B trademark stands for millions of trouble-free operations. Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY AIR-CONDITIONING AND REFRIGERATION CONTROLS

PRESSURE AND TEMPERATURE CONTROLS







High-pressure cutout and motor starter in same enclosure. Temperature controls can be mounted with motor starter in same way.

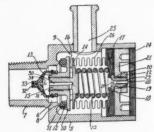


PATENTS

Week of November 25

(Continued)

2,431,457. RELIEF VALVE. Carlton W. 2,331,307. MEMBER VALVE. Carlton W. Bonduraut, Dayton, Chio, assignor to Standard-Thomson Corp., a corporation of Delaware. Application March 13, 1943, Serial No. 479,035. 3 Clams. (Cl. 277—



1. A relief valve comprising a casing having at one end thereof a port to communicate with a source of fluid under pressure, and a valve seat extending about said port, a movable valve member cooperating with said valve seat, a supporting element having screw threaded connection with said casing adjacent the other end thereof for adjustment lengthwise of said casing and having an openwise of said casing and having an open-ing therethrough, a stud supported in and extending through said opening and conextending through said opening and con-nected with said supporting element for axial movement therewith, said support-ing element being rotatable about said stud, a disk rigidly secured to said stud in opposed relation to said valve member, spring means confined between said disk and said valve member, to urge the latter and said valve member, to urge the latter toward said valve seat, and a bellows extending about said spring means concentric with the axis of said valve, having at its ends sealed connection with said valve member and having an effective diameter substantially equal to the effective diameter of said valve seat.

2,431,484. LIQUID COOLING UNIT. Daniel L. Raufman, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application July 2, 1945, Serial No. 602,773. 7 Claims. (Cl. 62—141.)

1. In a refrigeranting system, an evaporator, refrigerant liquefying means for sup-

tor, refrigerant liquefying means for sup-plying liquid refrigerant to said evapora-tor, means for supporting said evaporator for movement into and out of a container,

problems.

6767 Southwest

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MEN TO GROW

Let us send you well trained, energetic young men

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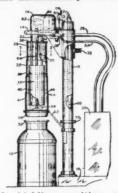
ing, and contracting. Only \$5 per year, 52 issues.

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the contents of which are to be cooled, and an evaporator shield mechanism inand an evaporator shield mechanism in-cluding means automatically movable into



and out of shielding position as said evaporator is moved out of and into said container.

2.431.647. CENTRIFUGAL PAN. Robert A. Mayne, Dayton, and Henry G. Dybvig, near Dayton, Ohio; said Dybvig assignor to said Mayne. Application March 8, 1944, Serial No. 525,810. 25 Claims.



1. A centrifugal type fan assembly in-1. A centrifugal type fan assembly including a pair of continuous convolutions consisting of ribbed marginal portions, and a plurality of fan blades integral with the marginal portions, alternate blades being integral with one convolution and the remaining blades integral with the other convolution, the blades being spaced apart to form an air channel between each adjacent blade.

2,431,648. BLOWER. Robert A. Mayne, Dayton, Ohio. Application Feb. 9, 1945, Serial No. 577,060. 16 Claims. (Cl. 230



1. A fan assembly of the centrifugal type including a pair of end rings having tongues struck out from the body thereof and a plurality of blades, each of said blades having undercut notches forming shoulders between which the rings are seated, one shoulder of each blade engaging the inside of the ring, extensions on the blades overlapping the end rings, each extension being provided with an aperture receiving a tongue bent over so

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POSITIONS WANTED

REFRIGERATION MANUFACTURERS-REFRIGERATION MANOFACTURERS— Sales executive, experienced, with over 2,000 accounts in California—both dealer and distributor. Ten years experience in selling and merchandising appliances and refrigeration equipment. Age 33. Excel-lent references and financial responsibility. Available as manufacturers agent or sales representative. BOX 2630, Air Conditioning & Refrigeration News.

EXECUTIVE-ENGINEER seeks connection with corporation requiring an experienced executive with technical knowledge. Masters degree. Eleven years of experience in air conditioning and refrigeration development and manufacture. Broad experience ranging from Research Engineer thru Chief Engineer. Age 37. Write for resume. BOX 2640 Air Conditioning & Refrigeration News.

REFRIGERATION SALES, manufacturers representative, engineeer, age 33, family, 15 years experience. Own successful sales business, but desire change of climate. Prefer Texas or California. Must have, and can produce in a position with possibilities of at least \$12,000. BOX 2641 Air Conditioning & Refrigeration News.

23 YEARS, INDUSTRIAL and commercial, estimating, installing, servicing, operating, all refrigerants. 1/4 HP to 200 ton units. 11 years District Engineer for large packer.

43 years of age. Desire responsible connection, preferably Southwest, will accept foreign. Ability references available.

BOX 2642 Air Conditioning & Refrigera-

as to hold the extensions in position, the shoulders formed by the undercut notches absorbing centrifugal force exerted by the blades when the blower is rotated.

AVAILABLE FOR LICENSING OR SALE

Swift & Co. and its subsidiaries have placed the following patents on the Register of Patents as available for license at reasonable royalty. Detailed information concerning the patents may be obtained from Swift & Co., Union Stock Yards, Chicago.

REFRIGERATOR CARS AND MOTOR VEHICLES

Pat. 1,889,686. REFRIGERATOR. Patented Nov. 29, 1932. A refrigerator unit adapted for use in motor vehicles and equipped with compartment of lower temperature than the remaining space of the refrigerator. Group 35—84. Reg. No. 8,756.

Pat. 1,892,531. ICE AND BRINE TANK FOR REFRIGERATOR CARS. Patented Dec. 27, 1932. A special corrugated con-struction to strengthen the ice and brine tanks of refrigerator cars. Group 35—84. Reg. No. 8,757.

Pat. 1,922,067. HATCH COVER. Patented Aug. 15, 1933. A special hinge for hatch covers of refrigerator cars. Group 33—59. Reg. No. 8,759.

Pat. 2,202.954. REFRIGERATION UNIT. Patented June 4, 1940. An improved refrigeration unit having an improved air cooling system for use in enclosures of various types, such as rooms, railway cars and automobile truck bodies. Group 25.24. Pag. No. 8.780. 35—84. Reg. No. 8,760.

Pat. 2,298,569. REFRIGERATED VEHI-CLE. Patented Oct. 13, 1942. An improved air conditioner for use in transport vehicle bodies, such as trucks, railway cars and the like, in which a liquid medium is carried first in direct contact with a chilling medium and thence immediately across the current of treated air. Group 35—84. Reg. No. 8,761.

TRUCK DE TION. Patented July 18, 1944. Means for refrigerating motor trucks, railway cars, and like vehicles, comprising an improved refrigeration unit and means of dividing a truck body into a series of transverse compartments, each of which is supplied with sufficient chilled air to maintain the desired temperature. Group 35-84. Reg.

Pat. 2,199,485. FOOD STORAGE. Patented May 7, 1940. An apparatus and method for the control of moisture in refrigerated chambers involving the introduction of water in the form of a fine mist at selected points within the mist at selected points within the chamber. Group 35—84. Reg. No. 8,833.

Wheeler Catalog Covers Steam Jet Ejectors

PHILADELPHIA-A new catalog containing information on steam jet vacuum refrigeration for water cooling requirements of air conditioning and process applications was recently issued by the C. H. Wheeler Mfg. Co.

The catalog, No. 1462, is entitled "Steam Jet Ejectors for Vacuum Service and Vacuum Refrigeration." It contains 36 pages and includes

30 sectional drawings. There are also flow diagrams, engineering data, installation guide, formulae, curves, and tables.

Two pages of the book are devoted to explaining steam jet vacuum refrigeration and one section gives the required data for quotation on steam jet vacuum refrigeration equipment. ADMINISTRATIVE OR sales engineering. Ten years experience in refrigeration and air conditioning industry, including supervision of design and development group. Also production engineering, sales engineering, field service. BOX 2648 Air neering, field service. BOX 264 Conditioning & Refrigeration News.

POSITIONS AVAILABLE

SALES ENGINEERS experienced in successfully selling top national-name commercial refrigeration lines to join California's most progressive merchandising organization and sell commercial refrigeration to small industrial applications. You would sell fixture lines and Mills machines. High income positions available throughout California. Write J. CORRIGAN, 4015 Wilshire Blvd., Los Angeles 5, California.

COMMERCIAL AND industrial refrigeration and air conditioning installation and servicemen with at least 3 years experience. 40 hour week, company trucks furnished, \$1.80 to \$2.00 scale. DRESCO REFRIGERATION COMPANY, 4404 Woodward, Detroit 1, Michigan.

WANTED: SALES Representative to sell air conditioning, refrigeration, heating, and electrical supplies and equipment to dealers. REPUBLIC ELECTRIC COM-PANY, Davenport, Iowa.

FACTORY SALES engineer, age 28 to 38 with sales experience, plus application experience, in refrigeration and air conditoning with 5 to 50 HP compressors and condensing units. This is an opportunity to grow with a fast-growing-manufacturer. Write fully about experience and salary desired. SCHNACKE, INC., 1016 E. Columbia, Evansville, Indiana.

SALES CORRESPONDENT, age 25 to 32 with refrigeration and air conditioning engineering experience and education. Must be sales minded and know the technical questions encountered in the sale nationally of 5 to 50 HP compressors and condensing units. Write fully sors and condensing units. Write fully about experience and salary desired. SCHNACKE, INC., 1016 E. Columbia, Evansville, Indiana.

AIR CONDITIONING installation superintendent. High salary, start now. Give complete details as to your qualifications with first letter. SMITH & LOWMAN, INC., Court & Plum Streets, Cincinnati 2,

RETAIL SALESMEN who have had successful experience selling top quality commercial refrigeration lines such as Hill, Tyler, Koch, etc., to join one of California's most progressive commercial refrigeration firms. Positions available throughout sunny California. Excellent income. Write stating full qualifications. F. WILLIAMS, 1946 S. Main Street, Los Angeles 7, California.

EXCELLENT OPPORTUNITY for sales agents now calling on the refrigeration trade. Complete, exclusive beer systems, cube makers, reach-in boxes and similar equipment. Replies strictly confidential. Write BOX 2627 Air Conditioning & Refrigeration News.

DISTRIBUTOR NATIONALLY advertised air conditioning, commercial refrigeration, domestic and industrial oil burners, wants manager of operations. Five figure posi-tion which requires graduate engineer with executive, business, estimating, sales, contract and installation experience. Special emphasis en air conditioning and refrigeration. Connecticut territory. Give full details, confidential. BOX 2632, Air Conditioning & Refrigeration News.

SALESMAN TO contact dealers and contractors for a wholesale concern covering New England States. Opportunity to be-come member of the firm. BOX 2635 Air Conditioning & Refrigeration News.

WANTED REFRIGERATOR cabinet design engineer. Modern new Midwest refrigerator factory. Inquiries kept confidential. BOX 2639 Air Conditioning & Refrigeration News.

REFRIGERATION SERVICE Engineer to maintain supervisory and administrative contact with wholesale distributors throughout Eastern territories. Head-quarters New York City. Applicants must possess—record of accomplishment and strong references. Salary fully com-mensurate with responsibility. BOX 2644 Air Conditioning & Refrigeration News.

COMMERCIAL SALESMAN to represent leading Frigidaire dealer. We have open-ing in large protected territory. For complete information, write BOX 2645 Air Conditioning & Refrigeration News.

POSITION OPEN for district manager. Middle Atlantic States by leading com-mercial condensing unit manufacturer. Good salary and opportunity for advance-ment. Include photograph, tabulation of education and experience first letter. BOX 2646 Air Conditioning & Refrigera-

EQUIPMENT WANTED

WILL PURCHASE dies of discontinued model small domestic refrigerator and of home freezers not over 12 foot. BOX 2649 Air Conditioning & Refrigeration

EQUIPMENT FOR SALE

ATTENTION! REFRIGERATION dealers! For sale! Brand new close-coupled air cooled ½ HP condensing units complete with Tecumseh pump. ½ HP motor, air cooled condenser. receiver, service valves, etc. In quantities of ten—\$93 each. Quantity discounts. BERLY MANUFACTURING CORP., 275 Atlantic Avenue, Brooklyn 2, New York.

WAREHOUSE REMOVAL-Excess inventory; new air conditioning equipment, condensing units, evaporative condensers, shell & tube condensers, fans, blowers, coils, etc. special prices to offset warehouse moving costs. Also new motors, All standard makes. BERLY MANUFACTURING CORP., 275 Atlantic Avenue, Brooklyn 2, New York.

EXCELSIOR BEER pumps—made since 1933 are again available in 2 sizes: ¼ HP and ¼ HP. Attractive prices for dealers, EXCELSIOR MACHINE COMPANY, 2601 Kutztown Road, Reading, Pa.

QUALITY BOBTAIL fountains; reach-ins, QUALITY BOBTAIL fountains; reach-ing, walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel, porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with meching. Equipment made to specific machines. Equipment made to special order. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16. MA 2-9093.

OVERSTOCKED ON Artkraft Bev-Food units. Sacrificing carload still in crates; \$175 each with ¼ HP condensing unit and Delco Motor, FOB Marshall, Texas, Write or wire JONES BROS, REFRIGERATION CO., 309 East Bowie Street, Marshall Texas. Marshall, Texas.

HILL COLD box: Three compartment, 40°, outside 155" long, 60" wide, 84" high, 8" cork insulation galvanized iron lined. Door left end, three doors front, complete with Lipmann "Freon" compressor "F-12" and water coil, compressor needing minor repairs, connected to 5 HP, 1740, 3 phase enclosed Louis Allis Motor. Mr. Decker, MERCK & CO., INC., Rahway, New Jersey, Rahway 7-1200.

JACK & HEINTZ fractional horsepower motors. Complete line of various sizes: ½, ¼, ⅓, ½-110/220 AC 60 cycles; 115/230 AC 50 cycles. Available for immediate delivery. Maximum discounts. Export Dept., S. J. O'BRIEN SALES CORP., 560 West 34th Street, New York 1, N. Y. Telephone WI. 7-2100.

FOR SALE: 6 new Pacific packaged air conditioners, ½ ton, window mount, air cooled with either open or sealed type units. (Pacific models 50 WA and 50 WAO.) \$175 each. Factory cost is \$231. O. K. RADIO & APPLIANCE CO., 1329 So. Staples Street, Corpus Christi,

SEALED CROSLEY TERMINALS. SEALED CROSLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three \$5.25 (Part No. 1020) Installation tool 20¢. Immediate delivery Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 55 N. V.

SACRIFICE CONDENSING units new in original crates, water cooled. Copeland 3 HP \$395; Hussmann 3 HP \$395; Hussmann 7½ HP \$595; all complete with motors, water valves and controls. Wire or write WAND'S, INC., 1070 St. Charles Avenue, New Orleans, La.

FOR SALE: 8-5 HP Mills, 4-3 HP Carrier units, complete with motors 60% discount. 5-5 HP McQuay & Typhoon weathermakers, \$495 each. 86-1/2 HP Universal, 29-1/2 HP crew units, less motors—make offer. All above are new in original crates. BOX 2647 Air Conditioning & Refrigeration News tioning & Refrigeration News.

FRANCHISES AVAILABLE

DISTRIBUTORSHIPS ARE now available in a number of good Southwest and middle West towns & cities, and in parts of Florida, to established consumer sales and contracting organizations, for distribution of a new and modern all-metal exterior venetian blind. The manufacturer is a large well established Southwestern firm. A complete national organization is in the making. National advertising—telephone listings—sales assistance—exclusive territory to qualified distributors. For information write P. O. BOX 1144, Houston 1, Texas. Give your company name, bank references and experience record. of Florida, to established consumer sales

DISTRIBUTORSHIPS AVAILABLE NOW One of the leading manufacturers of rock wool has several open territories in the middle West states. The information accumulated through many years successful home insulation contracting is made available to those firms who can qualify for this franchise. This manufacture for this franchise. This man furnishes personal assistance district representatives to all franchise distributors. For information write BOX 2636 Air Conditioning & Refrigeration News. Give bank reference, the nature of your present business and your experience.

BUSINESS OPPORTUNITIES

FOR SALE: Refrigeration Sales and Service in fast growing Adrian, Michigan Other interests reason for selling. Low rental lease. Unlimited opportunity for experienced party. Includes agencies and dealerships. Priced at \$3,000 plus inventory. ADRIAN SALES COMPANY, Adrian, Michigan.

WANT MANUFACTURER to make and sell my new look cooling fan. Over one hundred thousand new look fans were sold in 1947. This artistic aluminum fan delivers a silent blast or a wafting stim. Backed by twenty seven years of fadesign and motor research. GRIME ENGINEERING, Syracuse 6, New York.

MIAMI, FLORIDA—one of leading refrigeration, air conditioning, and appliance sales and service establishments—in same location ten years. Over \$150,000.00 yearly sales. Business with profitable past and unlimited future. Netted over \$20,000.00 past year. Located in fastest growing city in U.S.A.—Miami. Inquiries confidential. BOX 2565. Air Conditioning & Refrigeration News.

AT MIAMI Florida commercial & domestic sales and service business. Have commercial franchises and state dealers. Well established, good location, long lease with low rent. Sickness demands immediate sale and the price is right. BOX 368 Air Conditioning & Refrigeration News.

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mediate X 2643 News.

Your editorial "Waistlines Will Be Leaner in 1948 for People Who Don't Own Home Freezers" is very good sales copy and should be a "shot in the arm" for some ailing sales people in the freezer field.

It seems the main trouble is that the manufacturers, distributors, and dealers have failed to convince Mrs. Housewife of the convenience of home freezers. The many advantages of owning a freezer have been extolled to the public from every angle but to little avail. Actually experiencing these advantages in their own home is naturally the best way to convince people on freezers.

The problem then is how to get freezers into the home before the customer is actually sold on the idea. As much as I hate to say it, a scarcity of food now will probably do the trick in introducing the home freezer to many new owners and the industry will have gained many new enthusiastic believers.

We would appreciate your written permission to reproduce this article for a mailing throughout the country.

> C. I. MAHON, Industry Manager, Refrigeration Division

LOCAL PAPER WON'T HELP. SO HE'LL DO IT HIMSELF

Scoggins Appliance Co. Muskogee, Okla.

Editor:

Your editorial on Home Freezers in the Dec. 22 issue of AIR CONDITIONING & REFRIGERATION NEWS is a "dilly" and like your other editorials is very timely.

We showed it to our local publisher, thinking he could use it as a news item to help the local dealers push the sale of home freezers, but, he is more interested in seeing us do a lot of advertising than printing something free that might help us make more sales.

Therefore we wish to request permission from you to use any part of your editorial for reprint with our advertising of home freezers. We will send you a copy of the advertising if permission is given to use any of the editorial.

H. B. SCOGGINS



Refrigeration and Air Conditioning Systems



UNIT COOLERS FIN COILS AIR CONDITIONING

Refrigeration Appliances, Inc.

923 W. Lake St., Chicago 7, III.



IQUID flows inside the spiral corrugations in "prime" heat exchange relationship with the colder higher velocity suction gases which travel outside the rapid-transer "Liquid-Fin" heat exchanger element. Capacity per unit size is very high.

ASK YOUR WHOLESALER . . . OR WRITE REMCO, INC., ZELIENOPLE, PA.

EVEN ICE ASSOCIATION GETS ON BANDWAGON

The Oklahoma Association of Ice Industries

Oklahoma City, Oklahoma Editor:

Your editorial, "Waistlines Will Be Leaner in 1948 For People Who Don't Own Home Freezers," should prove interesting and profitable to every owner of a locker plant. May I reproduce this, with full credit to mail to ice plants and other locker owners in this state?

If they are available I should prefer to purchase reprints for distribution to these lockers plants. The number needed would be 300.

If you will wire me collect it will be appreciated.

Best wishes for the best year AIR CONDITIONING & REFRIGERATION NEWS has known. It is the best paper in its field in the world.

> W. A. HADLEY, Secretary

PUBLIC WILL BE HIT 'IN THE LARDER'

Emil Steinhorst & Sons, Inc. Utica, N. Y.

Editor: Your splendid editorial "Waistlines

Will Be Leaner In 1948 for People Who Don't Own Home Freezers" merits our heartiest congratulations. Certainly no truer words were ever written!

We hope that the dozing public is not awakened too sharply when the realization of the extremely serious food situation does hit them. Whether Mr. John Public "lives to eat" or "eats to live" will make little difference when the inadequacy, yet indispensibility, of his larder brings the food element into brilliant focus.

Reprints of such an article would surely serve as a "this is it" theme to our dealers and distributors. It's a perfect pep and sales talk. The true situation just couldn't be put in a more convincing light.

May we please have your permission to reprint the editorial?

Our best wishes to you for continued success in '48.

MURIEL J. STEINHORST,

Advertising Manager

DEALER SEEKS REPRINTS OF 'WAISTLINE' EDIT

Greenlev's Flint, Mich.

Editor:

I read with a great deal of interest in your Dec. 22, 1947 issue, the article regarding "Waistlines and Home regarding Freezers." May we have your permission to use this editorial in an ad on home freezers?

Although I believe I have told you before, we think your paper is the best trade paper we take and we have been subscribers almost since you started. Inside Dope really is a big help in our business.

STUART GREENLEY

CALLS IT 'TIMELY, **FULL OF GOOD SENSE'**

International Harvester Co. Des Moines, Iowa

Editor: Your editorial, "Waistlines Will Be Leaner in 1948 for People Who Don't Own Home Freezers," which appeared in the Dec. 22 issue of AIR CONDITIONING & REFRIGERATION NEWS is certainly timely and full of good sense.

With your permission, it is our desire to make reprints of this article in whole or in part for distribution to our dealers and potential

E. G. JOHNSRUD

CARRIES A PUNCH!

Kelvinator Cleveland, Ohio

Editor:

I have read with a great deal of interest and pleasure your editorial 'Waistlines Will Be Leaner in 1948 to People Who Don't Own Freezers" in the Dec. 22 issue of the NEWS. This article is so timely and carried so much punch that I would like to secure a dozen reprints, if possible, for use in connection with the promotion of the Kelvinator home freezer.

W. J. LASALLE, District Manager

DELAVAL MOVES TO PROMOTE FREEZERS

The DeLaval Separator Co. New York, N. Y.

Editor:

As producers of the DeLaval Speedway Food Freezer which is as you may know produced in two sizes for the farm trade, we are very much interested in the article which appeared in the Dec. 22, 1947 edition your publication and entitled "Waistlines Will Be Leaner in 1948 for People Who Don't Own Home

We believe that this article would be of great interest to all of our dealers and wonder therefore if it would be possible to obtain a quantity of 5,000 reprints which we would of course, pay for or if you would kindly grant us permission to reprint the same number of copies at our own printing plant giving you the usual credit line.

H. DOESSCHATE

BLOWUP IS REQUESTED BY DEEPFREEZE

Deepfreeze Div., Motor Products Corp. North Chicago, Ill.

Your editorial in the Dec. 22 issue of AIR CONDITIONING & REFRIGERATION NEWS, certainly hit the nail on the head.

We would like your permission to reprint this editorial in a large blowup size for distribution to our dealers and distributors.

Best wishes for the new year. R. V. NEWBELL, Advertising Manager SCHNACKE Complete CONDENSING UNITS

SCHNACKE units have replace able refrigerant-cooled steel cylinder sleeves, complete pressure lubrication, balanced crankshafts, individual cylinder liquid relief, individual cylinder valve cage assemblies, built-in suction strainers, sealed crankcase, balanced pressure shaft seal, insert type bearings, water or air cooled heads, and many other advanced features.

Condenser is ASME approved, fin tube, cleanable type mounted in sturdy base. Water control valve and pressure controls in-



Illustrated above is the "F-C" Model, with capacity from 10 H.P. low temperature to 25 H.P. Air Conditioning. T-C Models 5 to 15 H.P. available. Models less condenser, from

Our new foundry now makes deliveries on most models possible in one to two weeks.

Complete engineering data sent promptly

<u>SCHNACKEJING</u>

1016 E. Columbio St., Evansville, Ind.

UNSURPASSED! For Personalized Service

. . . say many CHASE customers. Big orders, medium orders-yes, even tiny orders-all receive close, personal attention. Customers on our books are more than mere names—they are friends; the kind of friends who have made "Good Will" the greatest asset in our business.

CHASE refrigeration supply co. Not. 546 WEST 11914 ST., CHICAGO 28, ILL. - Phone PULIMAN 5125

"Easily understandable ---

and a great aid to service engineers"

REFRIGERATION PROBLEMS AND THEIR SOLUTION

by Paul Reed

In two volumes, J-1 and J-2



Manager, Refrigeration Perfex Corp.

Vol. 1

Handy, practical, reference information for the refrigeration service engineer, "Refrigeration Problems and Their Solution" is written and illustrated so as to be of interest to salesmen, users, and others who want a fuller knowledge of refrigera-

You'll like the way Paul Reed has organized his material . . . and he writes clearly, making these books easy to understand

and a pleasure to read. And because Paul Reed has such a wealth of practical knowledge of refrigeration, and years of experience behind him, you'll find reading these books the next best thing to a person-to-person chat about your refrigeration problems.

Conveniently cross-indexed for instant use, "Refrigeration Problems and Their Solution" can provide "the missing link" in your search for authentic advice on "how to make it work."

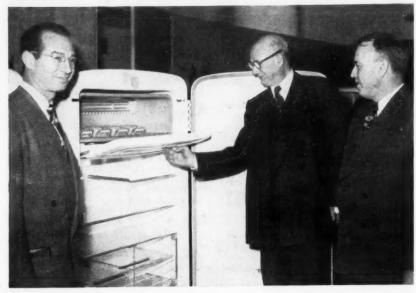
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Vol. 2 Chapter Chapter Page Subject Subject No. No. Measurement of Temperature The Evaporative Condenser 129 29 Temperatures, Pressures, and Heat Contents Proper Handling of Compressor Oil 166 Changing from "Freon-12" to Methyl Chloride... 169 Thermostatic Expansion Valve and Superheat.... 28
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BUSINESS NEWS PUBLISHING CO., 450 W. FORT ST., DETROIT 26, MICH.

Mart Buyers View 1948 Refrigerators



Ben and Herman Platt of the May Co., Los Angeles, inspect the across-the-top frozen food compartment in one of the new models shown at the Kelvinator and Leonard room in the Furniture Mart. With them (at right) is Charles S. Lawson, vice president in charge of sales, Kelvinator division, Nash-Kelvinator Corp.

Woman-To-Woman Chat In Kitchen Helps Housewife Understand Her New Freezer

By John O. Sweet and George M. Hanning

JACKSON, Mich. - New home freezer owners in many parts of Michigan served by the Consumers Power Co. are assured a thorough understanding of their recently purchased appliances through a plan worked out by the utility.

Under this plan, the dealer from whom the freezer was purchased, is encouraged to send a postcard bearing the customer's name and address to the utility, according to Lyle Clemmer, general residential sales supervisor for Consumers Power.

These cards are turned over to the company's home economists who then schedule a visit to the customer's

When she calls, the competent, trained home economist demonstrates, in a neighborly, woman to woman manner, how to use the freezer. She further explains how to wrap foods for the freezer, how to store them, and how to prepare them for the table. Her whole presentation is informal and not given from a canned speech, Clemmer declared.

The demonstrator answers any questions that may have been raised in the customer's mind and leaves her telephone number pasted on the inside lid of the freezer. The housewife is instructed to call that number at any time she runs into any difficulty or needs further information about freezing.

Consumers Power has 15 such home economists out giving demonstrations on home freezers and gas and electric ranges in 10 of its 15 sales districts. When on freezer calls, they accent preparation and use, while in range demonstrations they emphasize product features, Clemmer pointed out.

The utility plans to enlarge its home economics staff and place a home service director in charge when competent personnel can be obtained, he explained. He added that the program of the department has been limited in scope due to the lack of women meeting the qualifications for

At present the staff must sandwich home demonstrations in between crowded schedules of dealer, school, and club demonstrations. Even so. during the first 10 months of 1947. 14 women managed to make 9,200 home calls on freezers and ranges, he stated.

Another phase of the utility's freezer promotional program is cooperative dealer advertising.

Last summer, for instance, during the canning season, Consumers Power worked out two home freezer advertisements for use in leading newspapers in its territory. Dealers were invited to insert their own advertising around the utility's copy.

The Consumer Power advertisements, one measuring 45 column inches and the other 60 column inches, were written in a general, educational nature, plugging no one brand of freezer. Rather they pointed out the advantages of home freezing over "old fashioned canning methods.'

Dealers, generally, took enthusiastically to the idea. From three to 27 dealers participated in each local promotion, dep. the size of

the locality. In some newspapers, the combined advertisements occupied nearly two full, facing pages.

The newspapers were asked to run stories pertaining to home freezing in the news columns adjacent to the advertisements. Some obliged, others

The success of the campaign may be measured in the words of the utility's dealer coordinator in one district who reported that "the firms whose advertisements were published are very receptive to the program and attribute a sizable share of their freezer interest and sales to it.

"I also find, in talking with these dealers, that, in their opinion, advertisements of an educational nature are most desirable at this time.

Commercial Credit Borrows \$50 Million from Prudential

BALTIMORE, Md. - On Jan. 12 Commercial Credit Co. consummated a 3% 15 year unsecured loan of \$50,000,000 with The Prudential Insurance Co. of America, according to an announcement made today by A. E. Duncan, Chairman of the Commercial Credit Board.

This loan follows an arrangement made in September for two subordinated unsecured loans aggregating \$25,000,000 at 3% with a 10 year One of these was for maturity. \$18,000,000 with the Metropolitan Life Insurance Co., and the other for \$7,000,000 with the Mutual Life Insurance Co. of New York.

Duncan further stated that the demand for its services had required Commercial Credit Co. to expand its borrowings to approximately \$300 .-000,000 before Nov. 1, 1947—the date upon which the war-time consumer credit restriction Regulation W was removed.

It would appear, according to Duncan, that full employment of its resources was in prospect for Commercial Credit when automobile and other hard goods production hits its stride, irrespective of possible renewal of some consumer credit controls by Congressional action.

Department Store Sales Rise 9% for Week Ending Jan.3

WASHINGTON, D. C. - For the week ending Jan. 3, department store sales rose 9% above the corresponding week last year, the Federal Reserve Board has reported. Only the New York district showed a loss (5%). Greatest increases were reported from the south central area of the country.

The percentage change from last years, by Federal Reserve districts, is as follows: New York -5, Boston 10, Philadelphia 16, Cleveland 16, Richmond 7, Atlanta 9, Chicago 8, St. Louis 25, Kansas City 19, Dallas 22, and San Francisco 6.

For the four weeks ending Jan. 3, sales were up 7% over the same period last year. For the year 1947, they were up 9%.

Prices Can Hold --

(Concluded from Page 1, Column 3)

Business policy generally appeared to be one of "avoiding price increases wherever possible." Criticism was directed against a few producers who do not appear to be following this policy, but many pointed out that the demand for their products has been so great that they "could have raised prices to a much higher level if they had desired to do so." Other executives found that increased competition in some lines has prevented passing on of cost increases to buyers and expected this condition to become most evident for more products in the next six months.

Most of the producers reported that new orders are holding steady at a high level. Only 21% revealed a declining trend and consequently production prospects generally are regarded as favorable. Raw material and labor shortages and the absence of any unused capacity were often cited as barriers to further increases. Increased price resistance was not generally observed, although one third of the executives found some evidence of it.

Many executives expressed great concern over the break-even points, higher at present than in prewar years. Instances were reported where a moderate sales decline would wipe out all profits and result in deficit operations.

The difficulties which confront manufacturers in attempting to hold prices in line were cited. It was pointed out that average hourly earnings of wage earners, according to data prepared by the Conference Board, have increased 90% since 1939, and wholesale prices of raw materials

New Ben-Hur Vice Pres. Hearing Set on Sale



A. B. BECHAUD elected vice president of Ben-Hur Mfg. Co.

(BLS index) have risen 137%. These increases compare with a gain of only 84% in manufactured goods. Semi-manufactured goods have risen 94%, farm products 178%, and food products 145%.

The area of costs over which manufacturers have any real control has narrowed, it was said by some of the cooperators. Labor efficiency was reported "not up to previous standards" in some industries where capacity operations and raw material shortages prevent increases in pro-duction "which might go a long way toward offsetting higher costs."

Cooley Joins Fay-San

BUFFALO - T. Read Cooley has been named sales promotion manager for Fay-San Distributors, Inc. here.

Of Stangard-Dickerson **Properties In Paterson**

NEWARK, N. J.-A hearing has been scheduled at 2 p.m. Jan. 22 in Court Room 4 in the Federal Building here for all creditors of Stangard. Dickerson Corp., now operating under a reorganization plan, on the proposed sale of certain plant properties in Paterson, N. J. and certain surplus, machinery, furniture and equip-

Petition for the sale was made by Augustus C. Studer, Jr., trustee for the company.

Interstate Development Corp. has entered into a contract to purchase the plant and plant sites in Paterson, N. J.

The surplus machinery, furniture, and equipment in the plant at 35 Alabama Ave., Paterson, would be sold at public auction starting at 11 a.m., Jan. 28, unless blocked by some occurrence at the Jan. 22 hearings.

Three Explosions Shake Nashville Products Plant

NASHVILLE, Tenn.-The plant of the Nashville Products Corp., which makes freezing equipment, stoves, etc., was shook by three explosions recently.

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Cobb

There has been labor dispute at the plant for eight weeks, but the plant has continued partial operation, as some of the workers have remained on the job.

WILSON ANSWERS THE DEALERS' DREAM WITH A SOLID SALES STORY!



- Exclusive Removable Front Heavy Duty Condensing Unit
- Extra Insulation
- Occupies Small Floor Space
- Molded Rubber Throat
- Sliding Metal Basket Trays
- Welded Steel Frame
 Quick Contact Freezing Compartment

YOU CAN SAY IT AGAIN AND AGAIN-

"The Wilson Reach-In Line Rings the \$ Sign"

Freezers and refrigerators of rugged construction, handsome appearance and economical operation, backed by the pioneer name in front-opening convenience. Milk Coolers that have set new standards with dairymen. Walk-in refrigerators and freezer models in sizes from 6.6 cu. ft. to 120 cu. ft. capacity to fit every need and pocketbook. It will pay you to investigate the complete Wilson line. Write to Dept. 13 today for additional information.

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WALK-INS

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